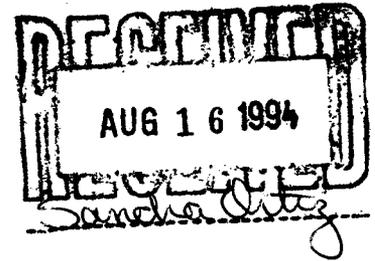




2390
Department of Energy
Field Office, Albuquerque
Los Alamos Area Office
Los Alamos, New Mexico 87544

AUG 15 1994



CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Benito Garcia, Chief
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
525 Camino de los Marquez
P. O. Box 26110
Santa Fe, NM 87502

Dear Mr. Garcia:

Enclosed for your review is the third quarterly progress report for the Transuranic Waste Inspectable Storage Project (TWISP) at the Los Alamos National Laboratory (LANL). This report is required by Section IX.C of the December 10, 1993 three-party Consent Agreement pursuant to Compliance Orders 93-01, 93-02, 93-03, and 93-04. This report is being submitted by the Department of Energy, Los Alamos Area Office (LAAO) and the University of California.

The enclosed report includes activities related to TWISP during the reporting period of May 1, 1994 through July 31, 1994. The following elements, as required by the Consent Agreement, are addressed in the enclosed report:

1. A brief description of activities completed during the reporting period to implement the requirements of the Consent Agreement.
2. A brief description of activities scheduled for the following reporting period.
3. A description of any change in key project personnel which occurred during the reporting period.
4. A description of problems encountered during the reporting period and mechanisms used or proposed for resolving the problems.
5. Tables and figures summarizing all data, sampling and test results for the period.

Supporting documentation will be retained at LAAO and will be made available to your staff upon request. If you have any



16581

Benito Garcia

2

AUG 15 1994

questions regarding this matter, please call Jon Mack of my staff at (505) 665-5026.

Sincerely,



Joseph C. Jozella
Acting Asst. Area Manager
Office of Environments and
Projects

LAAMEP:7JM-252

Enclosure

cc w/enclosure:

M. Baker, CST-7, LANL,
MS-J595
P. Schumann, CST-7, LANL,
MS-E539
J. Corpion, ESH-8, LANL,
MS-K498

cc w/o enclosure:

A. Gancarz, CST-DO, LANL,
MS-J515
A. Drypolcher, CST-7, LANL,
MS-E517
D. Erickson, ESH-DO, LANL,
MS-K491
D. Garvey, ESH-8, LANL,
MS-K490
R. Nevarez, WMD, AL

**TRANSURANIC WASTE INSPECTABLE STORAGE PROJECT
QUARTERLY PROGRESS REPORT
MAY 1, 1994 - JULY 31, 1994**

The Transuranic (TRU) Waste Inspectable Storage Project (TWISP) was initiated in February 1993 in response to the New Mexico Environment Department's (NMED) Compliance Order NMHWA 93-03. The TWISP involves the recovery of approximately 16,865 TRU and TRU-mixed waste containers currently under earthen cover on Pads 1, 2 and 4 at Technical Area (TA)-54, Area G, and placement of that waste into inspectable storage. All waste will be moved into inspectable storage by September 30, 2003. Waste recovery and storage operations will emphasize protection of worker safety, public health, and the environment.

I. Activities accomplished during the period May 1, 1994 through July 31, 1994.

1. Dome Construction Pending Approval of the Safety Analysis Report

The draft Safety Evaluation Report (SER) detailing DOE's assessment of the Preliminary Safety Analysis Report (PSAR) was published July 18, 1994. The draft SER is currently in a technical accuracy review. The finalized SER and PSAR are scheduled for publication by August 29, 1994. Construction will commence following PSAR approval.

Bids for the construction contractor were due on July 29, 1994. Bids will be evaluated during early August. An award is anticipated by August 18, 1994. Notice to proceed with construction is contingent on approval of the PSAR.

Approximately 25,000 cubic yards of fill dirt to be used under the new temporary storage domes has been relocated to the eastern end of TA-54, Area G in anticipation of construction activities.

2. Waste Analysis Plan Development

Efforts to develop a revised waste analysis plan (WAP) with a specific waste analysis schedule have been initiated. Because of time constraints, work is currently focusing on a parallel WAP for existing TRU waste storage. CST-7 personnel have met with the Laboratory's Environmental Protection staff, technical contractors, DOE representatives, and representatives from other DOE sites to identify all applicable criteria for waste characterization and available technologies and facilities.

3. Final Design Comment Resolution

Although all DOE comments on the final design have been resolved, CST-7 is currently considering alternative fire suppression systems within the storage domes. In the event a decision is made to modify to an alternate system, there should not be any delay in initiating construction or operations.

4. Sampling in Support of Eventual Closure

In mid-April, soil samples were collected from various locations that will be disturbed as part of the TWISP. Analysis of these samples will provide a baseline of information for comparison when the planned storage facilities are eventually closed.

An enhanced surveillance program around the TRU Pads has been ongoing since June 1993. Because of growing demand and limited analytical laboratory capacity, analytical turnaround has often been quite lengthy. Several contract analytical laboratories are currently working off the backlog.

A preliminary assessment of data received to date have not identified organic or metal concentrations exceeding site-wide background except for a few common remnants from laboratory extraction. DOE/UC is currently in the process of conducting a more thorough review of the data. Because it is anticipated that there will be a large volume of data generated during the ten year life of the TWISP, it is proposed that data be maintained on site and made available for state review.

5. Draft Program Plans and Operating Procedures in Review

Draft versions of a Health and Safety Plan, Quality Assurance Plan, and Project Management Plan have been prepared for the TWISP. These documents are currently undergoing internal review. Revisions to these documents will occur as a result of comments by internal UC organizations and comments on the PSAR.

6. Equipment Purchasing in Process

Equipment purchases necessary for safe waste recovery and storage are ongoing. Purchase of two forklifts and a vacuum truck are nearing completion. The cost of these three items alone will be approximately \$500,000. UC anticipates that this equipment will be on site by October, 1994. Arrangements for one additional on-site support trailer is currently underway.

7. Drum Vent System Procurement

The final design for the drum vent system (DVS) is complete. Procurement for the DVS is currently underway. An additional failure mode analysis for the DVS is being completed to verify the reliability of safety features in the design.

8. Update on Waste Verification Facilities

Plans for developing new facilities for verifying the validity of existing process knowledge are ongoing. A brief description of planned facilities is provided below:

- Waste Characterization Glovebox Phases I (sorting), II (coring), and III (head space analysis): Phase I final design review and detailed design have been completed and procurement is underway. Preliminary development of Phase II design criteria was initiated as were identification of potential sampling and analysis protocols.
- Waste Characterization, Reduction, and Repackaging Facility (WCRRF) (formerly the Size Reduction Facility) upgrades for verification of hazardous constituents: Health and safety concerns for the WCRRF are in review. A purchase requisition is currently in place for a characterization glovebox.
- Real-Time Radiography (RTR) for nonintrusive inspection of drum contents: procurement is underway, the RTR should be on-site by early 1995.
- Segmented Gamma Scanner (SGS) to quantify isotopic content of drums: an SGS is being developed within the Laboratory and should be available by March 1995; the

SGS will be augmented with additional software to give it tomographic gamma scanning capabilities.

9. Training

Construction worker training requirements have been finalized.

II. Activities scheduled for the period August 1, 1994 through October 31, 1994.

1. DOE will publish the Safety Evaluation Report and approve the PSAR.
2. Construction will be initiated for retrieval and storage facilities.
3. The enhanced environmental surveillance of the TRU Pad area will continue.
4. Reviews will continue for draft documentation such as the Project Management Plan, Container Recovery Safe Operating Procedures (SOPs), the Quality Assurance Plan, and the Health and Safety Plan. Additional draft SOPs may also be developed.
5. Major equipment procurements will continue.
6. Work will continue on planned waste verification facilities.
7. Upgrades to the Drum Prep Facility will be completed in mid-October.
8. DVS procurement should be completed.

III. Changes in key personnel during the period May 1, 1994 through July 31, 1994.

There were no changes in key personnel during this reporting period.

IV. Problems encountered during the period May 1, 1994 through July 31, 1994.

Problem: Construction has been delayed pending approval of the PSAR.

Solution: DOE anticipates that the PSAR will be approved by August 28.

V. Summary of monitoring during the period May 1, 1994 through July 31, 1994.

In May 1994, a number of aluminum oxide thermoluminescent dosimeters (TLDs) were placed in a manhole on Pad 1 to help assess potential dose consequences associated with waste retrieval. Dosimetry results indicate that general dose rates will be below the 5 millirem per hour DOE administrative limit. Individual drums that exceed the expected dose rates may require shielding or other protective measures.

Title: Multi-Media Compliance Investigation **Date:** April, 1994

Volume: 2 of 4, RCRA

Page(s): 23 **Paragraph(s):** 5 **Line(s):** 1

FINDING (QUOTE FROM REPORT):

"According to facility records, TA-11 has one satellite accumulation area and one rest house (less-than-90-day storage site). The satellite accumulation area was located outside building 24. There was one 55-gallon container partially filled with wipes with acetone generated from cleaning high explosive material. This site was not under direct control of the operator of the process that generated the waste. The rest house did not have any wastes accumulated at the time of inspection."

ACTION/COMMENT:

Wipes with acetone are used to clean D38 parts only, they are not used to clean high explosive material. The satellite accumulation area is outside under an awning, directly adjacent to the room where waste is initially generated. Access to this area (TA-11) requires that personnel have security clearances for passage through the perimeter security checkpoint. After passing the perimeter checkpoint, a second manned checkpoint limits access to the exclusion area and requires a badge exchange. The area is patrolled regularly by security personnel. Visitors must be cleared-in by TA-11 personnel.

Only one experiment is conducted at a time, and all personnel work to support that effort. Each individual (there are normally about 5 people on-site) is fully aware of the operation (the waste generating process) and the locations of the waste storage areas. These individuals are responsible for maintaining compliance at their waste storage areas and for ensuring that waste is managed in a safe manner. The area is under the control of the operators of the area as required by 40 CFR §262.34(c) which states in part "A generator may accumulate ... hazardous waste ... in containers at or near any point of generation where wastes initially accumulate, which is under control of the operator of the process generating the waste"

The rest house, TA-11-24, has never been considered a less-than-ninety day storage area.

Title: Multi-Media Compliance Investigation **Date:** April, 1994

Volume: 2 of 4, RCRA

Page(s): 15 **Paragraph(s):** 2 **Line(s):** 1

FINDING (QUOTE FROM REPORT):

"Spent lithium and nickel-cadmium batteries, generated throughout [TA-3] building 40, were being accumulated at the main building 40 entrance corridor. This area was not in the control of the operator of the process generating the waste."

ACTION/COMMENT:

EPA has not issued clear formal guidance as to what constitutes "at or near any point of generation" nor has it defined measures deemed to provide adequate control. In the absence of such guidance, and in keeping with the spirit of the RCRA (to protect human health and the environment), LANL interprets the requirements for "at or near" and "under the control" to include administrative controls as well as, or in lieu of, physical controls.

To facilitate the accumulation of spent batteries in as practical a manner as possible, while adhering to the tenants of the RCRA, LANL issued guidance to generators of spent batteries on 12/23/91 (**Enclosure 14**). In that guidance LANL recommended using established satellite accumulation points where available or establishing centrally located collection points to receive spent batteries from widely dispersed sources. The satellite accumulation area mentioned in the finding (TA-3-40, main corridor) was established in June, 1992, for the express purpose of collecting spent batteries for later disposal or recycling. The area is operated in accordance with the generator requirements for satellite accumulation.

On February 23, 1993, EPA provided guidance to another generator using an example directly relevant to the TA-3-40 satellite accumulation area practice (**Enclosure 15**). In that letter, EPA discussed management of "universal wastes" and collection of those wastes at a single satellite accumulation area although the waste had been generated from diverse sources. The term universal waste is not defined; however, the example used in the letter is nickel-cadmium batteries. Regarding the requirement that waste be accumulated under control of the operator of the process generating the waste, the letter goes on to state "... we [EPA] would view this condition as being satisfied for certain 'universal wastes' provided the generator demonstrates that the personnel responsible for generating and/or accumulating the waste have adequate control over the temporary storage of these wastes." When establishing satellite accumulation areas, LANL's policy is to assign responsibility for management and oversight of the location to an individual. That individual is responsible for maintaining compliance at their waste storage area and for ensuring that waste is managed in a safe manner. This policy provides adequate control.

This satellite accumulation area has not been cited for noncompliance nor has LANL observed problems with the management of this location that would indicate inadequate control. The Laboratory therefore believes it is operating this location in compliance with the RCRA standards for hazardous waste generators.

August 15, 1994

Title: Multi-Media Compliance Investigation **Date:** April, 1994

Volume: 2 of 4, RCRA

Page(s): 79 **Paragraph(s):** 3 **Line(s):** 1

FINDING (QUOTE FROM REPORT):

"Copies of LDR Notifications were not retained for 23 manifests."

ACTION/Comment:

As communicated by LANL personnel, NEIC personnel did not review all requested manifests while they were on-site but asked for copies of any manifest that the NMED had previously copied. Working from the list of manifests provided in the multi-media report, LANL personnel cross referenced all twenty-three manifest numbers to LDR notifications in their files, copies of which are enclosed (**Enclosure 16**).

August 15, 1994

Title: Multi-Media Compliance Investigation **Date:** April, 1994

Volume: 2 of 4, RCRA

Page(s): 90 **Paragraph(s):** 5 **Line(s):** 1

FINDING (QUOTE FROM REPORT):

"The waste analysis plan in the permit has not been modified to specify procedures used to sample and analyze wastes for the Toxicity Characteristic Leaching Procedure (TCLP)."

ACTION/COMMENT:

LANL submitted a revised hazardous waste permit application (Parts A and B) in November, 1987. Included in the revisions of the Part B application was a revised waste analysis plan (WAP). Specifically, the WAP was revised to include the Toxicity Characteristic Leaching Procedure (TCLP). Transmittal of the revised permit application is documented in a letter from the Department of Energy to NMEID and dated November 25, 1987 (**Enclosure 17**); distribution included EPA. LANL also submitted a modified WAP in October, 1993 that incorporated the TCLP (**Enclosure 18**).

August 15, 1994

Title: Multi-Media Compliance Investigation **Date:** April, 1994

Volume: 2 of 4, RCRA

Page(s): 15 **Paragraph(s):** 2 **Line(s):** 4

FINDING (QUOTE FROM REPORT):

"Three separate laboratories were using the one accumulation area in building 40, room W112; this area was also not in control of the operator producing the hazardous waste."

ACTION/COMMENT:

EPA has not issued clear formal guidance as to what constitutes "at or near any point of generation" nor has it defined measures deemed to provide adequate control. In the absence of such guidance, and in keeping with the spirit of the RCRA (to protect human health and the environment), LANL interprets the requirements for "at or near" and "under the control" to include administrative controls as well as, or in lieu of, physical controls.

Waste generated in rooms N120, S104, and W112 are accumulated in room W112. Hazardous wastes are generated from similar operations in those three labs and consist of rags, cotton swabs, and gloves contaminated with trace quantities of spent solvents; there are no free liquids (**Enclosure 19**). The farthest distance traveled to room W112 is approximately 100 feet, along the corridor of building 40. The waste and the satellite accumulation area in room W112 is managed by an individual who has primary responsibility for waste management. Access to each contributing laboratory is controlled by a cipher lock, and room W112 requires a limited access key, ensuring that only authorized individuals enter the area. The responsible individual classifies all waste, places it in the satellite accumulation area, and arranges pick-up by waste management personnel (**Enclosure 20**).

At the TA-3-40-W112 satellite accumulation area, LANL personnel have operated under a combination of administrative controls and physical controls to ensure compliance with the standards in 40 CFR §262.34(c) which state in part "A generator may accumulate ... hazardous waste ... in containers at or near any point of generation where wastes initially accumulate, which is under control of the operator of the process generating the waste" This location is under the control of the operator of the process as defined by the regulations.

August 15, 1994

Title: Multi-Media Compliance Investigation **Date:** April, 1994

Volume: 2 of 4, RCRA

Page(s): 38 **Paragraph(s):** 3 **Line(s):** 1

FINDING (QUOTE FROM REPORT):

"Building 3, room 361S[;] Wastes produced in TA-21, building 3, rooms 301A & 301B; not in control of the operator of the process generating the hazardous wastes."

ACTION/COMMENT:

There is no such location as TA-21-3-361S.

August 15, 1994

Title: Multi-Media Compliance Investigation **Date:** April, 1994

Volume: 2 of 4, UST

Page(s): 9 **Paragraph(s):** 3 **Line(s):** 1

FINDING (QUOTE FROM REPORT):

"TA-21-325 was temporarily closed on November 23, 1992 when the tank was emptied, but the piping is still intact. Temporary closure of a UST system for 3 months or more requires that vent lines be left open and all other lines, pumps, manways, and ancillary equipment be capped and secured."

ACTION/COMMENT:

This finding is incorrect. The piping from UST TA-21-325 appeared to be intact from outside building TA-21-2. However, the UST piping was capped inside building 2.

The TA-21-325 nitric acid UST was installed in 1974, and used by the Chemistry and Metallurgy Baker-11 Group (CMB-11), for the recovery of plutonium from scrap. In 1978, the plutonium processing operations at TA-21 ended. At this time all equipment used for the recovery of plutonium from scrap was disconnected from the TA-21-325 nitric acid UST and moved to TA-55 and the piping was capped inside building 2. UST TA-21-325 was then used as a nitric acid storage tank until November 1992. On November 23, 1992, UST TA-21-325 was temporarily closed. On, September 11, 1993, this UST was officially closed and removed. No nitric acid contamination was discovered beneath the UST.

August 15, 1994

List of Enclosures

- 1** Copy of facsimile of LANL's Hazardous Waste Part A permit application, sent to Craig Kubic, NEIC, at his request.
- 2** Copy of letter to EPA transmitting LANL's Part B permit application revision to include LANL's OB/OD units. Includes copy of reply from EPA to DOE confirming LANL has interim status for its OB/OD units.
- 3** LANL Part A permit application, page 2a of 5, listing OB/OD units.
- 4** LANL Part A permit application, page 1 of 5, listing process code T04, and footnote.
- 5** LANL Part A permit application, page 2 of 5, Section III C, showing footnote reference to Part B for OB/OD unit descriptions.
- 6** LANL Part B permit application, page 2-2, Section 2.1.1.1, describing open burning units at Technical Areas 14 and 16.
- 7** LANL Part B permit application, page 4-26, Section 4.7 describing operation of open burning units at Technical Areas 14 and 16.
- 8** Data spreadsheet and discussion of comparison between total metals results and toxicity characteristic leaching procedure (TCLP) results. Includes letter from EPA establishing the "20 times rule" for comparing total metals data to toxicity characteristic leaching procedure data.
- 9** Map of TA-21 showing distance between the building 427 less-than-ninety-day storage area and the nearest telephones, fire alarms, water supplies, and fire extinguishers.
- 10** Map of TA-3 showing distance between the building 2133 less-than-ninety-day storage area and the nearest telephones, fire alarms, water supplies, and fire extinguishers.
- 11** Map of TA-22 showing distance between the building 91 less-than-ninety-day storage area and the nearest telephones, fire alarms, water supplies, and fire extinguishers.
- 12** Copy of relevant pages from draft SOP listing required equipment for TA-22 less-than-ninety-day operation.
- 13** Copy of letter from TA-22 operating personnel, stating their policies and history regarding the TA-22 less-than-ninety-day operation.
- 14** Copy of guidance issued to LANL waste generators regarding management of spent batteries.
- 15** Copy of letter from EPA providing guidance on the management of "universal wastes" (i.e., spent batteries).

August 15, 1994

- 16 Copies of alleged missing LDR notifications with discussion. Includes table cross referencing manifest numbers and LDR notifications.
- 17 Copy of letter from DOE to NMED and EPA transmitting modifications to LANL's hazardous waste permit application, Parts A and B). Revision number eight includes a modified waste analysis plan which incorporated the TCLP.
- 18 Copy of letter from NMED to DOE confirming their acceptance of the propose permit modifications. Includes copies of cover page of submittal and the relevant page of the Waste Analysis Plan.
- 19 Waste Profile 4274 describing hazardous waste accumulated in TA-3-40-W112.
- 20 Letter from TA-3-40 personnel stating their controls for management of hazardous waste in TA-3-40-W112.

August 15, 1994

ENCLOSURE
1

1.0 INTRODUCTION AND PART A APPLICATION

1.1 INTRODUCTION

This application was prepared for submittal to the Environmental Protection Agency (EPA) and the New Mexico Environmental Improvement Division (NMEID) in order to meet the requirements of the Resource Conservation and Recovery Act (RCRA) for a Part B Permit Application. The EPA authorization for Los Alamos to operate under interim status is included as Appendix A. The EPA formally requested the Part B Permit application in a February 22, 1984 letter to the Los Alamos Laboratory Director. Subsequently, the New Mexico Environmental Improvement Division transmitted a joint call-in of the permit application to the Laboratory dated April 23, 1984. These two letters are given in Appendices B and C, respectively. More recently, in a letter of August 7, 1984, the EPA requested a Part B Permit Application from Los Alamos addressing radioactive/chemical mixed waste (Appendix D). This permit application addresses chemical waste only. As necessary, a separate permit application will be submitted to address radioactive/chemical mixed waste.

The format of the Part B application follows an outline provided in "A Guide for Preparing RCRA Permit Applications for Existing Storage Facilities", U.S. EPA, 1982. An outline of the permit application with citations of the regulations covered by each section is shown in Table 1-1.

Los Alamos National Laboratory (Los Alamos) is a multidisciplinary laboratory (RCRA No. NM0890010515). The principal mission of the Laboratory is the design and development of weapons for the nation's nuclear arsenal; however, considerable research and development (R&D) is directed toward the development of the peaceful uses of nuclear energy including research on controlled thermonuclear reactions, fission reactors, nuclear safeguards, laser fusion, and medium energy physics. Extensive basic research programs in physics, chemistry, metallurgy, mathematics and computers, earth sciences, and electronics support these efforts. Biomedical and environmental research includes programs in molecular biology, radiobiology, cancer therapy, radiology, and industrial hygiene. Expansion into nonnuclear areas is represented by applied technology development of solar and geothermal energy and superconducting power transmission lines.

Los Alamos is managed by the University of California for the U.S. Department of Energy (DOE) with substantial work performed for the Department of Defense and the Nuclear Regulatory Commission. The University is responsible to DOE's Los Alamos Area Office (LAAO) which reports to the DOE Albuquerque Operations Office (ALO). Although not a primary function, some hazardous waste management and storage occurs at Los Alamos. Los Alamos falls under Standard Industrial Classification (SIC) Code Number 9711, national defense organizations.

Much of this application was prepared from existing documentation at the Laboratory. In addition, new information was developed for this permit application.

1.2 REVISED PART A APPLICATION

The complete RCRA Part A Application Revision is included in the following pages. The original Part A Application was submitted to the EPA in November 1980.

TABLE 1-1
FORMAT OUTLINE AND REGULATION REFERENCES

<u>REPORT SECTION</u>	<u>RCRA REGULATION REFERENCE</u> ⁽¹⁾
1.0 INTRODUCTION AND REVISED PART A APPLICATION	
1.1 INTRODUCTION	
1.2 REVISED PART A APPLICATION	270.13
2.0 FACILITY DESCRIPTION	
2.1 GENERAL DESCRIPTION	270.14(b)((1)
2.2 LOCATION INFORMATION	270.14(b)(11), 270.14(b)(19), 264.18(a)(b)
2.3 TRAFFIC PATTERNS	270.14(b)(10)
3.0 WASTE CHARACTERISTICS AND ANALYSIS PLAN	
3.1 CHEMICAL AND PHYSICAL ANALYSES	270.14(b)(2), 264.13, 264.73(b)(3)
3.2 WASTE ANALYSIS PLAN	270.14(b)(3), 264.13, 261 App. I
3.3 WASTE SEGREGATION	264.13
3.4 RESTRICTED WASTES	268.7
4.0 WASTE MANAGEMENT PRACTICES AND UNITS	
4.1 TA-50 BATCH TREATMENT SYSTEM AND ASSOCIATED CONTAINER STORAGE UNITS	270.15, 264.171-173, 264.175, 264.191-192
4.2 TA-50 CHEMICAL WASTE INCINERATOR	270.19, 264.340-345
4.3 TA-54, AREA L WASTE TRANSFER, PACKAGING AND STORAGE UNITS	270.15, 264.171-173, 264.175
4.4 TA-54, AREA L TREATMENT TANKS	270.16, 264.191, 264.193-199
4.5 TA-50 STORAGE PAD	270.15, 264.171-177
4.6 TA-16 INDUSTRIAL INCINERATOR	270.19, 264.343, 264.345
4.7 TA-14 AND TA-16 OPEN BURNING UNITS	270.23, 264.601-602
4.8 TA-14, 15, 36, AND 39 OPEN DETONATION UNITS	270.23, 264.601-602
4.9 RELEASE PATHWAYS FOR OPEN DETONATION/ OPEN BURNING UNITS	270.23, 264.601
5.0 GROUNDWATER MONITORING	264.90(b)(4)
6.0 PROCEDURES TO PREVENT HAZARDS	
6.1 SECURITY	302.A.4.b(1), 206.B.4
6.2 WARNING SIGNS	264.14(c)
6.3 INSPECTION SCHEDULES AND REQUIREMENTS-	270.14(b)(5), 264.15, 264.33, 264.174, 264.194, 264.303, 264.347
6.4 PREPAREDNESS AND PREVENTION REQUIREMENTS	264.34-35
6.5 PREVENTIVE PROCEDURES, STRUCTURES AND EQUIPMENT	270.14(b)(8)

TABLE 1-1
FORMAT OUTLINE AND REGULATION REFERENCES
 (CONTINUED)

<u>REPORT SECTION</u>	<u>RCRA REGULATION REFERENCE</u> ⁽¹⁾
6.6 PREVENTION OF ACCIDENTAL IGNITION OR REACTION OF IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE	270.14(b)(9), 270.15(d), 264.17, 264.176, 264.198, 264.312
7.0 HAZARDOUS WASTE FACILITY CONTINGENCY PLAN	
7.1 INTRODUCTION	
7.2 HAZARDOUS WASTE EMERGENCY RESPONSE RESOURCES	264.37, 264.52(c), 264.52(e)
7.3 NONSUDDEN RELEASES	
7.4 SUDDEN RELEASES	264.51, 264.52(a)
7.5 SPECIFIC EMERGENCY RESPONSE PROCEDURES FOR HAZARDOUS WASTE UNITS	270.14(b)(7), 264.56
7.6 EVACUATION	264.52(f)
7.7 SALVAGE AND CLEANUP	270.14(b)(7), 264.56
7.8 POST-EMERGENCY ASSESSMENT	
7.9 EMERGENCY RECORDS	
7.10 EMERGENCY REPORTS	270.14(b)(7), 264.56
7.11 CONTINGENCY PLAN AMENDMENT	264.54
8.0 PERSONNEL TRAINING	
8.1 OUTLINE OF TRAINING PROGRAM	264.16(d)(2)
8.2 TRAINING CONTENT, FREQUENCY, AND TECHNIQUES	270.14(b)(12), 264.16
8.3 EMERGENCY RESPONSE TRAINING	264.16(a)(3)
8.4 IMPLEMENTATION OF TRAINING PROGRAM	264.16(b), (c), & (e)
9.0 CLOSURE AND POST-CLOSURE PLAN	270.14(b)(13), 264.112
9.1 GENERAL CLOSURE/POST-CLOSURE INFORMATION	
9.2 CLOSURE PLAN FOR OPEN DETONATION/OPEN BURNING UNITS AND THE INDUSTRIAL INCINERATOR	270.14, 270.19, 270.23, 264.351, 264.603
9.3 CLOSURE PLAN FOR TA-50 STORAGE, BATCH TREATMENT, AND INCINERATION UNITS	
9.4 CLOSURE AND POST-CLOSURE FOR TA-54, AREA L HAZARDOUS WASTE MANAGEMENT UNITS	270.14(b)(13), 270.21(e), 164.112, 264.310(a) & (b), 264.117 & 118
9.5 SAMPLING AND ANALYTICAL PROCEDURES	270.14, 264.110-120, 264.178, 264.197, 264.351, 268.41
10.0 OTHER FEDERAL LAWS	270.3, 270.14(b)(20)
11.0 CERTIFICATION	270.11

⁽¹⁾From Code of Federal Regulations 40.

EPA U.S. ENVIRONMENTAL PROTECTION AGENCY
GENERAL INFORMATION
Consolidated Permit Program
(Read the "General Instructions" before starting.)

EPA I.D. NUMBER
ENM089001051

I. FACILITY INFORMATION
I. EPA I.D. NUMBER
II. FACILITY NAME
III. FACILITY MAILING ADDRESS
IV. FACILITY LOCATION

Department of Energy
Attn: Mr. Harold Valencia
Los Alamos Area Office
Los Alamos, NM 87544

GENERAL INSTRUCTIONS
If a prescribed label has been affixed to the designated class, read the label carefully. If any of the information on the label does not agree with the information on this form, check the label and correct the information on this form. If the information on the label does not agree with the information on this form, please provide a proper fill-in grade below. If the information on the label does not agree with the information on this form, you need not answer I, III, V, and VI (except VI-d must be completed regardless). Complete the information on this form if no label has been provided. Read the instructions for designated facilities and for the legal authorization which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any question, you must submit this form and the supplemental form listed in the parentheses following the question. Mark "X" in the box in the third column of the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your facility is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	ANSWER			SPECIFIC QUESTIONS	ANSWER		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)			X	B. Does or will this facility (either existing or proposed) include a commercial metal finishing operation or operate metal production facility which results in a discharge to waters of the U.S.? (FORM 2B)			X
C. Is this facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	X		NO	D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)			X
E. Does or will this facility treat, store, or dispose of hazardous waste? (FORM 3)	X		YES	F. Do you or will you inject at this facility industrial or municipal effluents below the lowest stratum containing, within one quarter mile of the well being, underground sources of drinking water? (FORM 4)			X
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, heat fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)			X	H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of heavy fuel, or recovery of geothermal energy? (FORM 4)			
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)			X	J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)			X

III. NAME OF FACILITY
1. NAME: **LOS ALAMOS NATIONAL LABORATORY**

IV. FACILITY CONTACT
A. NAME & TITLE (Last, First & Middle): **HAROLD VALENCIA**
B. PHONE (area code & no.): **505 667 5105** FTS **843-5**

V. FACILITY MAILING ADDRESS
A. STREET OR P.O. BOX: **LOS ALAMOS AREA OFFICE**
B. CITY OR TOWN: **LOS ALAMOS**
C. STATE: **NM** D. ZIP CODE: **87544**

VI. FACILITY LOCATION
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: **LOS ALAMOS**
B. COUNTY NAME: **LOS ALAMOS**
C. CITY OR TOWN: **LOS ALAMOS**
D. STATE: **NM** E. ZIP CODE: **87544** F. COUNTY CODE: **30000**

A. FIRST		B. SECOND	
(specify)	NATIONAL SECURITY	(specify)	
C. THIRD		D. FOURTH	
(specify)		(specify)	

VII. OPERATOR INFORMATION

A. NAME		B. IS THE NAME IDENTICAL TO THE NAME ON THE VEHICLE REGISTRATION?	
LOS ALAMOS NATIONAL LABORATORY		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

C. STATUS OF OPERATOR (Enter the appropriate letter and the number box: if "Other", specify.)		D. PHONE (area code & no.)	
<input checked="" type="checkbox"/> FEDERAL <input type="checkbox"/> STATE <input type="checkbox"/> PRIVATE <input type="checkbox"/> PUBLIC (other than federal or state) <input type="checkbox"/> OTHER (specify)		A 5 0 5 6 6 7 5 0 2 1	

E. STREET OR P.O. BOX	
P O Box 1663 MS K490	

F. CITY OR TOWN	G. STATE	H. ZIP CODE	I. INDIAN LAND
LOS ALAMOS	NM	8 7 5 4 5	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)	B. PSD (Air Emissions from Proposed Sources)
9 IN N MO 0 2 8 3 5 5	0 P E
C. UIC (Underground Injection of Fluids)	D. OTHER (specify)
9 U I NM 00 2 8 5 7 6	(specify) NPDES
E. DCA (Mandatory Permits)	F. OTHER (specify)
9 R K	(specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

The mission of Los Alamos National Laboratory (LANL) is the application of science and technology to solve national problems including weapons development and energy supply and conservation programs, while basic science research complements and strengthens its fundamental technical capabilities. The LANL is owned by the US Department of Energy and operated under contract by the University of California.

XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)	B. SIGNATURE	C. DATE SIGNED
Harold Valencia Los Alamos Area Manager		

COMMENTS FOR OFFICIAL USE ONLY

G.

FORM 3 RCRA **EPA** **HAZARDOUS WASTE PERMIT APPLICATION** **EPA I.D. NUMBER**
 Consolidated Permit Program
 (This information is required under Section 3008 of RCRA.)

EPA I.D. NUMBER
 F N M 0 8 9 0 0 1 0 5 1 5

FOR OFFICIAL USE ONLY

APPROVAL DATE RECEIVED	APPROVED	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in item I above.

A. FIRST APPLICATION (Place an "X" below and provide the appropriate date)

1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.)

2. NEW FACILITY (Complete item below.)

YR.	MO.	DAY	FOR EXISTING FACILITIES, PROVIDE THE DATE (YR., MO., & DAY) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)	YR.	MO.	DAY	FOR NEW FACILITY PROVIDE THE DATE (YR., MO., & DAY) CONSTRUCTION BEGAN OR EXPECTED TO BEGIN

B. REVISED APPLICATION (Place an "X" below and complete item 1 below)

1. FACILITY HAS INTERIM STATUS

2. FACILITY HAS A RCRA PERMIT

III. PROCESSES - CODES AND DESIGN CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below describe the process (including its design capacity) in the space provided on the form (Item III-C).

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.
 2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:			Treatment:		
CONTAINER (barrel, drum, etc.)	801	GALLONS OR LITERS	TANK	T01	GALLONS PER DAY OR LITERS PER DAY
TANK	802	GALLONS OR LITERS	SURFACE IMPONDEMENT	T02	GALLONS PER DAY OR LITERS PER DAY
WASTE PILE	803	CUBIC YARDS OR CUBIC METERS	INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR
SURFACE IMPONDEMENT	804	GALLONS OR LITERS		T04	GALLONS PER DAY OR LITERS PER DAY
Other:			OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the process in the space provided: Item III-C.)		
INJECTION WELL	870	GALLONS OR LITERS			
LANDFILL	880	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER			
LAND APPLICATION	881	ACRES OR HECTARES			
OCEAN DISPOSAL	882	GALLONS PER DAY OR LITERS PER DAY			
SURFACE IMPONDEMENT	883	GALLONS OR LITERS			

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G	LITERS PER DAY	V	ACRE-FEET	A
LITERS	L	TONS PER HOUR	T	HECTARE-METER	H
CUBIC YARDS	Y	METRIC TONS PER HOUR	M	ACRES	AC
CUBIC METERS	C	GALLONS PER HOUR	GH	HECTARES	HC
GALLONS PER DAY	GD	LITERS PER HOUR	LH		

EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons or other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY	
		1. AMOUNT (specify)	2. UNIT OF MEASURE (from codes)				1. AMOUNT	2. UNIT OF MEASURE (from codes)
X-1	S02	600	G		5	T02	500 (b)	
X-2	T03	20	E		6	T03	0.56 (a)	
1	S01	284,070 (a) +	G		7	T04	N/A (a)	
2	S02	6,600 (b)	G		8	T04	2,534 (a)	
3	S04	25,500 (b) +	G		9	D80	0.71 (b) +	
4	I01	7,680 (a)	U		10			

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

- (a) Active units - See Part B Permit application for descriptions
 - (b) Inactive units to be closed under interim status - See individual closure plans for descriptions
- + Revised as of November, 1988

See Page 2a of 5 for explanations on process codes

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristic and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS.....	P	KILOGRAMS.....	K
TONS.....	T	METRIC TONS.....	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure; account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item I to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat row 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K054	900	P	T03D80	
X-2	D002	400	P	T03D80	
X-3	D001	100	P	T03D80	
X-4	D002				included with above

EXPLANATION OF PROCESS CODE LISTINGS AND/OR DESIGN CAPACITY

Line 1	S01	TA-54, Area L TA-50, Container Storage Units
Line 2	S02	TA-54, Area L Waste Oil Storage Tanks
Line 3	S04	TA-54, Area L Surface Impoundments B and D TA-35, TSL-85 and TSL-125 Surface Impoundments
Line 4	T01	TA-54, Area L TA-50, Batch Waste Treatment Unit
Line 5	T02	TA-16, Surface Impoundment
Line 6	T03	TA-16, Incinerator TA-50, Incinerator
Line 7	T04	The following open burning units are located at TA-16:

- Two burn pads (388, 399) for burning HE-contaminated solids. Each unit has a capacity of 1,000 pounds of solids per burn.
- Two pressure vessels (401, 406) for burning HE-contaminated sludges. Each unit has a capacity of 750 pounds of sludge per burn.
- One burn pad for HE-contaminated oil/solvent mixtures. This unit has a capacity of 100 gallons per burn.
- One flash pad for HE-contaminated equipment. This unit does not have a design capacity.
- One burn cage for HE-contaminated paper. This unit has a capacity of 3.0 cubic feet per burn.

The following waste detonation units are designed to open detonate explosives:

<u>Unit</u>	<u>Design Capacity</u> (pounds of HE per detonation)
TA-14-35	10
TA-15, Phermex	100
TA-36, Kappa 8	200

EPA ID NUMBER (Enter from page 1)	FOR OFFICIAL USE ONLY
WNH089DD10515	DUP

DESCRIPTION OF HAZARDOUS WASTES (Continued)

LINE NO.	A. EPA HAZARD WASTE NO. (Enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES	
				1. PROCESS CODES (Enter)	2. PROCESS DESCRIPTION (See III C.)
1	D 0 0 1	100,000	P	S 0 1 T 0 3	
2	D 0 0 2	300,000	P	S 0 1 T 0 1	
3	D 0 0 3	7,500	P	S 0 1 T 0 1 T 0 4	Reacted at TA-16 (See III C.)
4	D 0 0 3	5,000	P	S 0 1 T 0 1	Lithium Hydride only ⁺
5	D 0 0 4	2,000	P	S 0 1	
6	D 0 0 5	60,000	P	S 0 1 T 0 1	Sand from cleanout of explosive burn pads.
7	D 0 0 6	1,000	P	S 0 1 T 0 1	
8	D 0 0 7	1,500	P	S 0 1 T 0 1	
9	D 0 0 8	50,000	P	S 0 1	May contain other metals (D004-D01)
10	D 0 0 9	5,000	P	S 0 1 T 0 1	
11	D 0 0 1 0	500*	P	S 0 1	
12	D 0 0 1 1	1,250	P	S 0 1 T 0 1	
13	D 0 0 1 2	500*	P	S 0 1 T 0 3	
14	D 0 0 1 6	1,000	P	S 0 1 T 0 3	
15		END OF D DESIGNATOR			
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

EPA ID NUMBER (FROM 3400-1)	FOR OFFICIAL USE ONLY
W N M 0 8 9 0 0 1 0 5 1 5	DUP DUP

IV DESCRIPTION OF HAZARDOUS WASTES CONTAINED IN PROCESSSES

LINE NO.	A. EPA HAZARD WASTE NO. (FRIEF CODE)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (FRIEF CODE)	1. PROCESS CODES (FRIEF)				2. PROCESS DESCRIPTION (FRIEF)
				S 0 1	S 0 2	T 0 3	T 0 4	
1	F 0 0 1	80,000	P	S 0 1	S 0 2	T 0 3	T 0 4	Solidified if treatment standards are met
2	F 0 0 2	5,000	P	S 0 1	S 0 2	T 0 3	T 0 4	
3	F 0 0 3	5,000	P	S 0 1	S 0 2	T 0 3	T 0 4	
4	F 0 0 4	500*	P	S 0 1	T 0 3			
5	F 0 0 5	5,000	P	S 0 1	S 0 2	T 0 3	T 0 4	
6	F 0 0 6	500*	P	S 0 1	T 0 1			
7	F 0 0 7	12,500	P	S 0 1	T 0 1			
8	F 0 0 8	1,000	P	S 0 1	T 0 1			
9	F 0 0 9	6,000	P	S 0 1	T 0 1			
10	F 0 2 7	700	P	S 0 1	T 0 3			
11	F 0 2 8	700	P	S 0 1	T 0 3			
12	END OF F DESIGNATOR							
13								
14								
15								
16								
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26								

Can't read from page 2.

NOTE: Amend this page before completing if you have more than 28 wastes to list.

Form Approved OMB No. 1522-0004

EPA ID NUMBER (ENTER FROM PAGE 1)		FOR OFFICIAL USE ONLY	
W	W	DUP	DUP

DESCRIPTION OF HAZARDOUS WASTES				PROCESSES	
LINE NO.	A EPA HAZARDOUS WASTE NO. (ENTER CODE)	B ESTIMATED ANNUAL QUANTITY OF WASTE	C UNIT OF MEASURE (ENTER CODE)	1. PROCESS CODES (ENTER)	2. PROCESS DESCRIPTION
1	P 0 0 1	500*	P	S 0 1 T 0 3	
2	P 0 0 2	500*	P	S 0 1 T 0 3	
3	P 0 0 3	500*	P	S 0 1 T 0 3	
4	P 0 0 4	500*	P	S 0 1 T 0 3	
5	P 0 0 5	500*	P	S 0 1 T 0 3	
6	P 0 0 6	500*	P	S 0 1 T 0 4	
7	P 0 0 7	500*	P	S 0 1 T 0 3	
8	P 0 0 8	500*	P	S 0 1 T 0 3	
9	P 0 0 9	500*	P	S 0 1 T 0 4	
10	P 0 1 0	500*	P	S 0 1	
11	P 0 1 1	500*	P	S 0 1	
12	P 0 1 2	500*	P	S 0 1	
13	P 0 1 3	500*	P	S 0 1 T 0 1	
14	P 0 1 4	500*	P	S 0 1 T 0 3	
15	P 0 1 5	500*	P	S 0 1	
16	P 0 1 6	500*	P	S 0 1 T 0 3	
17	P 0 1 7	500*	P	S 0 1 T 0 3	
18	P 0 1 8	500*	P	S 0 1 T 0 3	
19	P 0 2 0	500*	P	S 0 1 T 0 3	
20	P 0 2 1	500*	P	S 0 1 T 0 1	
21	P 0 2 2	500*	P	S 0 1 T 0 4	
22	P 0 2 3	500*	P	S 0 1 T 0 3	
23	P 0 2 4	500*	P	S 0 1 T 0 3	
24	P 0 2 6	500*	P	S 0 1 T 0 3	
25	P 0 2 7	500*	P	S 0 1 T 0 3	
26	P 0 2 8	500*	P	S 0 1 T 0 3	

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-0060

EPA ID. NUMBER (enter from page 1)										FOR OFFICIAL USE ONLY									
NM0819011015115					W					DUP					DUP				

DESCRIPTION OF HAZARDOUS WASTES (continued)

ID NO.	A. EPA HAZARDOUS WASTE (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES																
				1. PROCESS CODES (enter)																
				2. PROCESS DESCRIPTION (enter)																
1	R029	500*	P	S	0	1	T	0	1											
2	R030	500*	P	S	0	1	T	0	1											
3	R031	500*	P	S	0	1	T	0	4	T	0	3								
4	R033	500*	P	S	0	1	T	0	4	T	0	3								
5	R034	500*	P	S	0	1	T	0	3											
6	R036	500*	P	S	0	1	T	0	3											
7	R037	500*	P	S	0	1	T	0	3											
8	R038	500*	P	S	0	1	T	0	3											
9	R039	500*	P	S	0	1	T	0	3											
10	R040	500*	P	S	0	1	T	0	3											
11	R041	500*	P	S	0	1	T	0	3											
12	R042	500*	P	S	0	1	T	0	3											
13	R043	500*	P	S	0	1														
14	R044	500*	P	S	0	1	T	0	3											
15	R045	500*	P	S	0	1	T	0	3											
16	R046	500*	P	S	0	1	T	0	3											
17	R047	500*	P	S	0	1	T	0	3											
18	R048	500*	P	S	0	1	T	0	3											
19	R049	500*	P	S	0	1	T	0	3											
20	R050	500*	P	S	0	1	T	0	3											
21	R051	500*	P	S	0	1	T	0	3											
22	R054	500*	P	S	0	1	T	0	1	T	0	4								
23	R056	500*	P	S	0	1														
24	R057	500*	P	S	0	1	T	0	3											
25	R058	500*	P	S	0	1														
26	R059	500*	P	S	0	1	T	0	3											

FOR OFFICIAL USE ONLY

EPA ID NUMBER (enter form 2460...)	W	DUP	DUP
WASTE NO: 891001105115			

LINE NO.	DESCRIPTION OF HAZARDOUS WASTES (continued)				D PROCESSES	
	A. EPA HAZARD WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (enter)	
1	P 0 6 0	500*	P	S 0 1 T 0 3		
2	P 0 6 2	500*	P	S 0 1 T 0 3		
3	P 0 6 3	500*	P	S 0 1 T 0 3 T 0 4		
4	P 0 6 4	500*	P	S 0 1 T 0 3 T 0 4		
5	P 0 6 5	500*	P	S 0 1 T 0 4		
6	P 0 6 6	500*	P	S 0 1 T 0 3		
7	P 0 6 7	500*	P	S 0 1 T 0 3		
8	P 0 6 8	500*	P	S 0 1 T 0 3		
9	P 0 6 9	500*	P	S 0 1 T 0 3 T 0 4		
10	P 0 7 0	500*	P	S 0 1 T 0 3		
11	P 0 7 1	500*	P	S 0 1 T 0 3 T 0 4		
12	P 0 7 2	500*	P	S 0 1 T 0 3		
13	P 0 7 3	500*	P	S 0 1 T 0 1 T 0 4		
14	P 0 7 4	500*	P	S 0 1 T 0 1		
15	P 0 7 5	500*	P	S 0 1 T 0 3		
16	P 0 7 6	500*	P	S 0 1 T 0 1 T 0 4		
17	P 0 7 7	500*	P	S 0 1 T 0 3 T 0 4		
18	P 0 7 8	500*	P	S 0 1 T 0 1		
19	P 0 8 1	500*	P	S 0 1 T 0 4		
20	P 0 8 2	500*	P	S 0 1 T 0 3		
21	P 0 8 4	500*	P	S 0 1 T 0 3		
22	P 0 8 5	500*	P	S 0 1 T 0 3		
23	P 0 8 7	500*	P	S 0 1		
24	P 0 8 8	500*	P	S 0 1 T 0 3		
25	P 0 8 9	500*	P	S 0 1 T 0 3		
26	P 0 9 2	500*	P	S 0 1		

CONTINUED

EPA ID NUMBER (enter from page 1)		FOR OFFICIAL USE ONLY	
W 41 M 01 81 91 01 01 11 01 51 11 51		W	DUP

IV DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION
1	P 1 2 1 1	500*	P	S 0 1 T 0 1	
2	P 1 2 2	500*	P	S 0 1 T 0 4	
3	P 1 2 3	500*	P	S 0 1 T 0 3	
4	END OF P DESIGNATOR				
5					
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EPA ID. NUMBER (enter from page 1)		FOR OFFICIAL USE ONLY	
WVMI0181910101105115		WI	DUP

DESCRIPTION OF HAZARDOUS WASTES CONTINUED

LINE NO.	A. EPA HAZARD WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (enter)
1	U101011	500*	P	S01T03	
2	U101012	1000	P	S01T03	
3	U101013	500*	P	S01T03	
4	U101014	500*	P	S01T03	
5	U101015	500*	P	S01	
6	U101016	500*	P	S01T04	
7	U101017	500*	P	S01T03	
8	U101018	500*	P	S01T03T04	
9	U101019	500*	P	S01T03	
10	U101101	500*	P	S01T03	
11	U101111	500*	P	S01T03	
12	U101121	500*	P	S01T03	
13	U101141	500*	P	S01T03	
14	U101151	500*	P	S01T03	
15	U101161	500*	P	S01T03	
16	U101171	500*	P	S01T03	
17	U101181	500*	P	S01T03	
18	U101191	500*	P	S01T03	
19	U101201	500*	P	S01T03T04	
20	U101211	500*	P	S01T03	
21	U101221	500*	P	S01T03	
22	U101231	500*	P	S01T03T04	
23	U101241	500*	P	S01T03	
24	U101251	500*	P	S01T03	
25	U101261	500*	P	S01T03	
26	U101271	500*	P	S01T03	

Continued from page 2.

NOTE: Photocopy this page before completing if you have more than 25 wastes to list.

Form Approved OMB No. 1525-0004

EPA ID NUMBER (enter from page 1)		FOR OFFICIAL USE ONLY
W NIM 018910101015115		W DUP 11 DUP

IV DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (enter)
1	U 0 2 8	500*	P	S 0 1 T 0 3	
	U 0 2 9	500*	P	S 0 1 T 0 3	
2	U 0 3 0	500*	P	S 0 1 T 0 3	
4	U 0 3 1	500*	P	S 0 1 T 0 3	
	U 0 3 2	500*	P	S 0 1 T 0 1	
	U 0 3 3	500*	P	S 0 1 T 0 4	
7	U 0 3 4	500*	P	S 0 1 T 0 3	
8	U 0 3 5	500*	P	S 0 1 T 0 3	
9	U 0 3 6	500*	P	S 0 1 T 0 3	
10	U 0 3 7	500*	P	S 0 1 T 0 3	
11	U 0 3 8	500*	P	S 0 1 T 0 3	
12	U 0 3 9	500*	P	S 0 1 T 0 3	
13	U 0 4 1	500*	P	S 0 1 T 0 3	
14	U 0 4 2	500*	P	S 0 1 T 0 3 T 0 4	
15	U 0 4 3	500*	P	S 0 1 T 0 3 T 0 4	
16	U 0 4 4	1000	P	S 0 1 T 0 3	
17	U 0 4 5	500*	P	S 0 1 T 0 3 T 0 4	
	U 0 4 6	500*	P	S 0 1 T 0 3	
	U 0 4 7	500*	P	S 0 1 T 0 3	
20	U 0 4 8	500*	P	S 0 1 T 0 3	
21	U 0 4 9	500*	P	S 0 1 T 0 3	
22	U 0 5 0	500*	P	S 0 1 T 0 3	
23	U 0 5 1	500*	P	S 0 1 T 0 3	
24	U 0 5 2	500*	P	S 0 1 T 0 3	
25	U 0 5 3	500*	P	S 0 1 T 0 3	
26	U 0 5 5	500*	P	S 0 1 T 0 3	

Continued from page 2.

NOTE: Amendatory this date before completing if you have more than 26 wastes to list.

Form Approved OMB No. 1820-004

EPA ID NUMBER (enter from page 1)	FOR OFFICIAL USE ONLY
VI 41 01 81 91 01 01 11 01 51 11 51	WI DUP

1. DESCRIPTION OF HAZARDOUS WASTES				2. PROCESSES	
LINE NO.	A. EPA HAZARDOUS WASTE CODE (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	1. PROCESS CODES (P1/P2)	2. PROCESS DESCRIPTION (enter description)
1	U1 01 81 31	500*	P1	S O 1 T O 3	
2	U1 01 81 41	500*	P1	S O 1 T O 3	
3	U1 01 81 51	500*	P1	S O 1 T O 3	
4	U1 01 81 61	500*	P1	S O 1 T O 3	
5	U1 01 81 71	500*	P1	S O 1 T O 3	
6	U1 01 81 81	500*	P1	S O 1 T O 3	
7	U1 01 81 91	500*	P1	S O 1 T O 3	
8	U1 01 91 01	500*	P1	S O 1 T O 3	
9	U1 01 91 11	500*	P1	S O 1 T O 3	
10	U1 01 91 21	500*	P1	S O 1 T O 4	
11	U1 01 91 31	500*	P1	S O 1 T O 3	
12	U1 01 91 41	500*	P1	S O 1 T O 3	
13	U1 01 91 51	500*	P1	S O 1 T O 3	
14	U1 01 91 61	500*	P1	S O 1 T O 3	
15	U1 01 91 71	500*	P1	S O 1 T O 3	
16	U1 01 91 81	500*	P1	S O 1 T O 3	
17	U1 01 91 91	500*	P1	S O 1 T O 3	
18	U1 11 01 11	500*	P1	S O 1 T O 3	
19	U1 11 01 21	500*	P1	S O 1 T O 3	
20	U1 11 01 31	500*	P1	S O 1 T O 3	
21	U1 11 01 51	500*	P1	S O 1 T O 3	
22	U1 11 01 61	500*	P1	S O 1 T O 3	
23	U1 11 01 71	500*	P1	S O 1 T O 3	
24	U1 11 01 81	500*	P1	S O 1 T O 3	
25	U1 11 01 91	500*	P1	S O 1 T O 3	
26	U1 11 11 01	500*	P1	S O 1 T O 3	

EPA I.D. NUMBER (COPY FROM PAGE 1)										PER OFFICIAL USE ONLY									
W NM 08 90010515										W DUP									

V DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO	A. EPA HAZARD. WASTES (ONLY CODE)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (ONLY CODE)	D. PROCESSES																		
				1. PROCESS CODES (ONLY)																		
				2. PROCESS DESCRIPTION (if a code is not entered in 1.)																		
1	U 1 1 1	500*	P	S	0	1	T	0	3													
2	U 1 1 2	500*	P	S	0	1	T	0	3	T	0	4										
3	U 1 1 3	500*	P	S	0	1	T	0	3	T	0	4										
4	U 1 1 4	500*	P	S	0	1	T	0	3													
5	U 1 1 5	500*	P	S	0	1	T	0	3	T	0	4										
6	U 1 1 6	500*	P	S	0	1	T	0	3													
7	U 1 1 7	500*	P	S	0	1	T	0	3	T	0	4										
8	U 1 1 8	500*	P	S	0	1	T	0	3	T	0	4										
9	U 1 1 9	500*	P	S	0	1	T	0	3													
10	U 1 2 0	500*	P	S	0	1	T	0	3													
11	U 1 2 1	500*	P	S	0	1																
12	U 1 2 2	500*	P	S	0	1	T	0	3													
13	U 1 2 3	500*	P	S	0	1																
14	U 1 2 4	500*	P	S	0	1	T	0	3													
15	U 1 2 5	500*	P	S	0	1	T	0	3													
16	U 1 2 6	500*	P	S	0	1	T	0	3													
17	U 1 2 7	500*	P	S	0	1	T	0	3													
18	U 1 2 8	500*	P	S	0	1	T	0	3													
19	U 1 2 9	500*	P	S	0	1	T	0	3													
20	U 1 3 0	500*	P	S	0	1	T	0	3													
21	U 1 3 1	500*	P	S	0	1	T	0	3													
22	U 1 3 2	500*	P	S	0	1	T	0	3													
23	U 1 3 3	500*	P	S	0	1	T	0	3	T	0	4										
24	U 1 3 4	10,000	P	S	0	1	T	0	1													
25	U 1 3 5	500*	P	S	0	1	T	0	4	T	0	3										
26	U 1 3 6	500*	P	S	0	1																

EPA ID. NUMBER (FROM PAGE 1)		FOR OFFICIAL USE ONLY	
NM101890011015115		WI	DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (CONTINUED)

LINE NO.	A. EPA HAZARD WASTE NO. (ENTER CODE)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (ENTER CODE)	D. PROCESSES	
				1. PROCESS CODES (ENTER)	2. PROCESS DESCRIPTION
1	U137	500*	P	S01T03	
2	U138	500*	P	S01T03	
3	U139	500*	P	S01T03	
4	U140	500*	P	S01T03	
5	U141	500*	P	S01T03	
6	U142	500*	P	S01T03	
7	U143	500*	P	S01T03	
8	U144	500*	P	S01	
9	U145	500*	P	S01	
10	U146	500*	P	S01	
11	U147	500*	P	S01T03	
12	U148	500*	P	S01T03	
13	U149	500*	P	S01T03	
14	U150	500*	P	S01T03	
15	U151	500*	P	S01	
16	U152	500*	P	S01T03	
17	U153	500*	P	S01T03	
18	U154	500*	P	S01T03	
19	U155	500*	P	S01T03	
20	U156	500*	P	S01T03	
21	U157	1000	P	S01T03	
22	U158	500*	P	S01T03	
23	U159	1000	P	S01T03	
24	U160	500*	P	S01T03T04	
25	U161	500*	P	S01T03	
26	U162	500*	P	S01T03	

EPA ID NUMBER (enter from page 1)	FOR OFFICIAL USE ONLY	
W NIM018190011015115	W DUP	DUP

DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD WASTE NO. (strip code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (strip code)	D. PROCESSES	
				1. PROCESS CODES (strip)	2. PROCESS DESCRIPTION (strip)
1	U1163	500*	P	S01T03	
2	U1164	500*	P	S01T03	
3	U1165	500*	P	S01T03	
4	U1166	500*	P	S01T03	
5	U1167	500*	P	S01T03	
6	U1168	500*	P	S01T03	
7	U1169	500*	P	S01T03	
8	U1170	500*	P	S01T03	
9	U1171	500*	P	S01T03	
10	U1172	500*	P	S01T03	
11	U1173	500*	P	S01T03	
12	U1174	500*	P	S01T03	
13	U1176	500*	P	S01T03	
14	U1177	500*	P	S01T03	
15	U1178	500*	P	S01T03	
16	U1179	500*	P	S01T03	
17	U1180	500*	P	S01T03	
18	U1181	500*	P	S01T93	
19	U1182	500*	P	S01T03	
20	U1183	500*	P	S01T03	
21	U1184	500*	P	S01T03	
22	U1185	500*	P	S01T03	
23	U1186	500*	P	S01T03	
24	U1187	500*	P	S01T03	
25	U1188	500*	P	S01T03	
26	U1189	500*	P	S01T04T03	

EPA ID. NUMBER (enter from page 1)	FOR OFFICIAL USE ONLY	
W 41M0890001105115	DUP	DUP

14 DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD WASTES (ENTER CODE)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (ENTER CODE)	D. PROCESSES	
				1. PROCESS CODES (ENTER)	2. PROCESS DESCRIPTION (ENTER)
1	U 1 9 0	500*	P	S 0 1 T 0 3	
2	U 1 9 1	500*	P	S 0 1 T 0 3	
3	U 1 9 2	500*	P	S 0 1 T 0 3	
4	U 1 9 3	500*	P	S 0 1 T 0 3	
5	U 1 9 4	500*	P	S 0 1 T 0 3	
6	U 1 9 6	500*	P	S 0 1 T 0 3	
7	U 1 9 7	500*	P	S 0 1 T 0 3	
8	U 2 0 0	500*	P	S 0 1 T 0 3	
9	U 2 0 1	500*	P	S 0 1 T 0 3	
10	U 2 0 2	500*	P	S 0 1 T 0 3	
11	U 2 0 3	500*	P	S 0 1 T 0 3	
12	U 2 0 4	500*	P	S 0 1	
13	U 2 0 5	500*	P	S 0 1 T 0 4	
14	U 2 0 6	500*	P	S 0 1 T 0 3	
15	U 2 0 7	500*	P	S 0 1 T 0 3	
16	U 2 0 8	500*	P	S 0 1 T 0 3	
17	U 2 0 9	500*	P	S 0 1 T 0 3	
18	U 2 1 0	500*	P	S 0 1 T 0 3	
19	U 2 1 1	500*	P	S 0 1 T 0 3	
20	U 2 1 2	500*	P	S 0 1 T 0 3	
21	U 2 1 3	500*	P	S 0 1 T 0 3 T 0 4	
22	U 2 1 4	500*	P	S 0 1 T 0 3	
23	U 2 1 5	500*	P	S 0 1	
24	U 2 1 6	500*	P	S 0 1	
25	U 2 1 7	500*	P	S 0 1 T 0 4	
26	U 2 1 8	500*	P	S 0 1 T 0 3	

EPA ID NUMBER (enter from page 1)		FOR OFFICIAL USE ONLY
W 01890011015115	W	DUP

IV DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (enter)
1	U 2 1 9	500*	P	S O 1 T O 3	
2	U 2 2 0	1000	P	S O 1 T O 3	
3	U 2 2 1	500*	P	S O 1 T O 3	
4	U 2 2 2	500*	P	S O 1 T O 3	
5	U 2 2 3	1000	P	S O 1 T O 3	
6	J 2 2 5	500*	P	S O 1	
7	U 2 2 6	1500	P	S O 1 T O 3	
8	U 2 2 7	500*	P	S O 1 T O 3	
9	U 2 2 8	2000	P	S O 1 T O 3	
10	U 2 3 0	500*	P	S O 1 T O 3	
11	U 2 3 1	500*	P	S O 1 T O 3	
12	U 2 3 2	500*	P	S O 1 T O 3	
13	U 2 3 3	500*	P	S O 1 T O 3	
14	U 2 3 4	500*	P	S O 1 T O 4	
15	U 2 3 5	500*	P	S O 1 T O 3	
16	U 2 3 6	500*	P	S O 1 T O 3	
17	U 2 3 7	500*	P	S O 1 T O 3	
18	U 2 3 8	500*	P	S O 1 T O 3	
19	U 2 3 9	1000	P	S O 1 T O 3	
20	U 2 4 0	500*	P	S O 1 T O 3	
21	U 2 4 2	500*	P	S O 1 T O 3	
22	U 2 4 3	500*	P	S O 1 T O 3	
23	U 2 4 4	500*	P	S O 1 T O 3	
24	U 2 4 6	500*	P	S O 1	
25	U 2 4 7	500*	P	S O 1 T O 3	
26	END OF U DESIGNATOR				

IV DESCRIPTION OF HAZARDOUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

*All entries with an asterisk in column IV B on Page 3 are generated in small volumes only. If a new process or activity will cause more than the stated volume to be stored, treated, or disposed, a revised Part A will be submitted.

EPA I.D. NO. (enter from page 1)

F N M 0 8 9 0 0 1 0 5 1 5 1 6

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail).

VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)

LONGITUDE (degrees, minutes, & seconds)

35 49 05 1

1 0 6 1 4 0 1 5

VIII. FACILITY OWNER

A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER		2. PHONE NO. (area code & no.)	
E United States Department of Energy		5 0 5 - 6 6 7 - 5 1 0	
3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F Los Alamos Area Office	G Los Alamos	N M	8 7 5 4 5

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type) Harold Valencia Los Alamos Area Office	B. SIGNATURE	C. DATE SIGNED
--	--------------	----------------

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type) Siegfried S. Hecker Director	B. SIGNATURE	C. DATE SIGNED
--	--------------	----------------

LIST OF FIGURES

1. Los Alamos Technical Areas.
2. Contour Map Showing the Location of the TA-54, Area L Treatment Tanks, Surface Impoundments, Waste packaging and Storage Pad, Shafts, and TA-54, Area G.
3. TA-54, Area L Waste Management Units.
4. TA-54, Area L Chemical Storage Facility Location Map.
5. TA-54, Area L Chemical Storage Facility Structural Drawing.
6. TA-54, Area L Waste Transfer, Packaging, and Storage Building.
7. Contour Map Showing the Location of TA-54, Area H, Shaft No. 9.
8. Contour Map Showing the Locations of the Batch Treatment System and Container Storage Area and the Waste Incinerator.
9. Locations of TA-50 Chemical Waste Incinerator and Container Storage Units.
10. Structural Diagram of the TA-50 Batch Waste Treatment Facility.
11. Treatment Development Facility Showing Locations of Chemical Waste Incinerator and Support Facilities.
12. Incinerator Process Diagram.
13. Chemical Storage TA-50.
14. Safety Storage Containers Brochure.
15. Contour Map Showing Location of TA-16 Open Burning Unit and TA-16-1150 Incinerator.
16. TA-16 Industrial Incinerator.
17. TA-16 Industrial Incinerator Structural Drawing.
18. TA-16 Pressure Vessel Structural Drawing.
19. TA-54, Area L Treatment Tanks Plan.
20. Contour Map Showing the Location of the TA-14 Firing Point and Burn Cage and the TA-40 Scrap Detonation Site.
21. Contour Map Showing the Location of the TA-15 and TA-36 Firing Points.
22. Contour Map Showing the Location of the TA-39 Firing Points.
23. Contour Map Showing the Locations of the TA-35-125 and TA-35-85 Surface Impoundments.
24. TA-54, Area L Conceptual Drawing of Container Storage Pad.

Continuation of Page 5 of 5

LIST OF PHOTOGRAPHS

- TA-14-23 and 35 - Building with firing point 35.
- TA-15, Pharmax - Firing point.
- TA-16-387 - Burn Pad for Flashing Equipment.
- TA-16-406 - Pressure Vessel for dried HE Sludge and Associated Storage Area.
- TA-16-394 - Burn Pans for HE Contaminated Oil.
- TA-16-401 - Pressure Vessel for Dried HE Sludge and Associated Storage Area.
- TA-16-399 - Burn Pad.
- TA-16-388 - Burn Pad.
- TA-36- 8 - Kappa 8 - Firing Point.
- TA-39-57 - Firing Point.
- TA-39-6 - Firing Point.
- TA-50-1 - Building Housing the Batch Waste Treatment Unit.
- TA-50-1 - Batch Waste Treatment.
- TA-50-1 - Batch Waste Treatment.
- TA-50-114 - Hazardous Waste Storage Module.
- TA-50-37 - Chemical Waste Incinerator Facility (east side).
- TA-54, Area L - Front Gate.
- TA-54, Area L - Gas Cylinder Storage.
- TA-54, Area L - Treatment Tanks.
- TA-54, Area L - Nonliquid Hazardous Waste Storage Area.
- TA-54, Area L - Hazardous Waste Storage Unit.

DRAWING NO. 2800A6
 NUMBER
 CHECKED BY
 APPROVED BY
 KCT
 10/11/88
 OR
 6

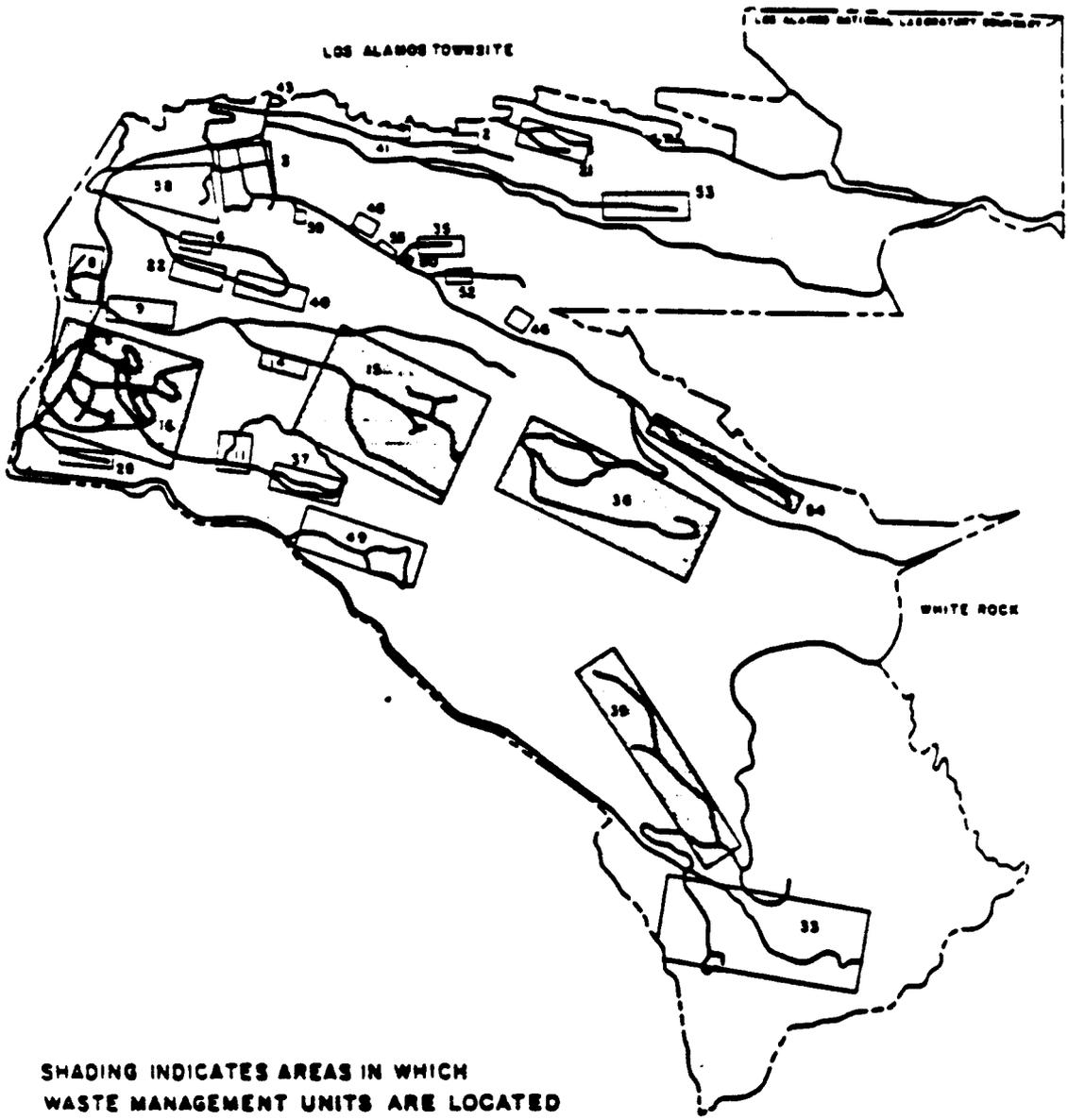


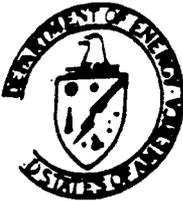
FIGURE 1
LOS ALAMOS
TECHNICAL AREAS
 PREPARED FOR
LOS ALAMOS
NATIONAL LABORATORY
LOS ALAMOS, NEW MEXICO



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Do Not Scale This Drawing

ENCLOSURE
2



Department of Energy
Albuquerque Operations
Los Alamos Area Office
Los Alamos, New Mexico 87544

NOV '88

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Allyn M. Davis
Director
Hazardous Waste Division, 6H
U. S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733

Dear Mr. Davis:

Enclosed is a copy of the revision to the Department of Energy's (DOE) Los Alamos National Laboratory (the Laboratory) Part B Resource Conservation and Recovery Act (RCRA) permit application to include the Laboratory's open burning/open detonation units. The requirement for this revision is derived from new regulations promulgated at 40 Code of Regulations (CFR) Part 264, Subpart X, on December 10, 1987. These regulations set forth requirements for the operation of miscellaneous hazardous waste management units including units used for open burning or open detonation of explosive and reactive wastes. As you are aware, the State of New Mexico's Environmental Improvement Division (NMEID) has yet to adopt these regulations under its Hazardous Waste program, and the U.S. Environmental Protection Agency (EPA) has invoked its authority under 40 CFR 264.1(f)(2) to implement the requirements in all states at the same time, regardless of their authorization status.

Section 3005(c) of RCRA requires that facilities operating miscellaneous units under interim status submit Part B RCRA permit applications for these units by November 8, 1988. The Laboratory currently operates 12 open burning/open detonation units in several technical areas at the facility. These units have interim status authority and are currently managed as 40 CFR Part 265, Subpart P thermal treatment units. DOE has included these units in this Part B revision.

Although EPA has not finalized guidance on the preparation of Part B applications for miscellaneous units, the U.S. Department of the Army has prepared a draft permit writer's guidance manual for Department of Defense open burning/open detonation units. This guidance manual, in addition to draft written comments on the manual prepared in July 1988 by EPA's Office of Solid Waste, was used in part in revising the Laboratory's Part B application to include these Subpart X units.

The major revisions contained in this submittal are responsive to the Subpart X requirements; however, additional minor revisions were made, where necessary, to improve the quality of the permit application as a whole. Please note the following specific changes:

1. Part A of the permit application has been reprinted in total and no longer depends upon previous submittals. In addition, this revision addresses concerns delineated by NMEID in a September 16, 1988 transmittal to DOE regarding the Laboratory's Part A.
2. The waste analysis plan, Section 3.0, has been revised to include the "California List" and the "First Third" land disposal restrictions and to clarify procedures established to comply with 40 CFR 268. This revision serves as a formal response to the Warning Letter issued to DOE by EPA on October 11, 1988 regarding land disposal restrictions.
3. Housekeeping changes have been made to the Part B to ensure completeness and accuracy such as changing the word "facility" to "unit" where appropriate and identifying the change in designation of State Road 4 to 502.

If you should have any questions about this submission, please call Donna Lacombe of my staff at (FTS) 843-5288.

Sincerely,


Harold E. Valencia
Area Manager

2DL-010

Enclosure

cc:
C.K. Crossman, NMEID, Santa Fe, N.M.

bcc:
A. Tiedman, ADS, MS A120, LANL
J. Puckett, HSE-DO, MS K491, LANL
A. Valentine, (HSE-8-88-652-1) HSE-8, MS K490, LANL
S. Brown, LC General, MS A187, LANL



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1446 ROSS AVENUE, SUITE 1200

DALLAS, TEXAS 75202-2733

December 21, 1989

Herald Valencia
Area Manager
U.S. DOE Los Alamos
Scientific Laboratory
Los Alamos, New Mexico 87544

Dear Mr. Valencia:

This letter is to acknowledge receipt of your Part B application under the Resource Conservation and Recovery Act (RCRA) for an open burning/open detonation explosive waste disposal area. The permitting authority for these units is under Subpart X of 40 CFR 264 entitled, "Miscellaneous Treatment Units". The Environmental Protection Agency (EPA) has permitting authority for Subpart X facilities until the State is authorized to issue these permits.

In submitting your application by November 8, 1988, your Subpart X unit will have interim status until a final permit determination is made. EPA's Headquarters in Washington D.C. and our own contractor are currently developing permit issuance guidance for Subpart X units. Your application will be processed as soon as appropriate guidance is available.

If you have questions about the status of your permit, please contact Jim Sales of my staff at (214) 655-6785.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Bill Gallagher", is written over the typed name.

Bill Gallagher, Chief
ALONM Section
RCRA Permits Branch

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EXPLANATION OF PROCESS CODE LISTINGS AND/OR DESIGN CAPACITY

- | | | |
|--------|-----|--|
| Line 1 | S01 | TA-54, Area L
TA-50, Container Storage Units |
| Line 2 | S02 | TA-54, Area L Waste Oil Storage Tanks |
| Line 3 | S04 | TA-54, Area L Surface Impoundments B and D
TA-35, TSL-85 and TSL-125 Surface Impoundments |
| Line 4 | T01 | TA-54, Area L
TA-50, Batch Waste Treatment Unit |
| Line 5 | T02 | TA-16, Surface Impoundment |
| Line 6 | T03 | TA-16, Incinerator
TA-50, Incinerator |
| Line 7 | T04 | The following open burning units are located at TA-16:

<ul style="list-style-type: none"> - Two burn pads (388, 399) for burning HE-contaminated solids. Each unit has a capacity of 1,000 pounds of solids per burn. - Two pressure vessels (401, 406) for burning HE-contaminated sludges. Each unit has a capacity of 750 pounds of sludge per burn. - One burn pad for HE-contaminated oil/solvent mixtures. This unit has a capacity of 100 gallons per burn. - One flash pad for HE-contaminated equipment. This unit does not have a design capacity. - One burn cage for HE-contaminated paper. This unit has a capacity of 3.0 cubic feet per burn. |

The following waste detonation units are designed to open detonate explosives:

<u>Unit</u>	<u>Design Capacity</u> (pounds of HE per detonation)
TA-14-35	10
TA-15, Phermex	100
TA-36, Kappa 8	200

4/3/83

TA-40, SDS

Inactive unit to be closed
under interim status

TA-39-6

100

TA-39-57

250

Line 8 T04

Waste sludges from TA-54, Area L treatment tanks and the TA-50 Batch Waste Treatment unit are mixed with portland cement and/or Envirostone and placed in 55-gallon drums. The cement serves to bind any fluid remaining in the sludge. This process is performed at TA-54, Area L.

Line 9 D80

TA-54, Area L
TA-54, Area G
TA-54, Area H
TA-16, Area P

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**U.S. ENVIRONMENTAL PROTECTION AGENCY
HAZARDOUS WASTE PERMIT APPLICATION**
Consolidated Permit Program
(This information is required under Section 3008 of RCRA.)

I. EPA I.D. NUMBER

F	N	M	0	8	9	0	0	1	0	5	1	5
---	---	---	---	---	---	---	---	---	---	---	---	---

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., mo., & day)	COMMENTS

II. FIRST OR REVISED APPLICATION

Place an "X" in the appropriate box in A or B below (mark one box only) to indicate whether this is the first application you are submitting for your facility or revised application. If this is your first application and you already know your facility's EPA I.D. Number, or if this is a revised application, enter your facility's EPA I.D. Number in item I above.

A. FIRST APPLICATION (Place an "X" below and provide the appropriate data)

1. EXISTING FACILITY (See instructions for definition of "existing" facility. Complete item below.)

2. NEW FACILITY (Complete item below.)

FOR EXISTING FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED (use the boxes to the left)

YR.	MO.	DAY

FOR NEW FACILITIES, PROVIDE THE DATE (yr., mo., & day) OPERATION BEGAN OR IS EXPECTED TO BEGIN

YR.	MO.	DAY

B. REVISED APPLICATION (Place an "X" below and complete item I above)

1. FACILITY HAS INTERIM STATUS

2. FACILITY HAS A RCRA PERMIT

III. PROCESSES - CODES AND DESIGN CAPACITIES

A. PROCESS CODE - Enter the code from the list of process codes below that best describes each process to be used at the facility. Ten lines are provided for entering codes. If more lines are needed, enter the code(s) in the space provided. If a process will be used that is not included in the list of codes below, then describe the process (including its design capacity) in the space provided on the form (item III-C).

B. PROCESS DESIGN CAPACITY - For each code entered in column A enter the capacity of the process.

1. AMOUNT - Enter the amount.

2. UNIT OF MEASURE - For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.

PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY	PROCESS	PROCESS CODE	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
Storage:			Treatment:		
CONTAINER (barrel, drum, etc.) TANK	901	GALLONS OR LITERS	TANK	T01	GALLONS PER DAY OR LITERS PER DAY
WASTE PILE	902	GALLONS OR LITERS	SURFACE IMPONDEMENT	T02	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPONDEMENT	903	CUBIC YARDS OR CUBIC METERS	INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
Disposal:			OTHER (Use for physical, chemical, thermal or biological treatment processes not occurring in tanks, surface impoundments or incinerators. Describe the processes in the space provided: item III-C.)	T04	GALLONS PER DAY OR LITERS PER DAY
INJECTION WELL	D79	GALLONS OR LITERS			
LANDFILL	D80	ACRE-FEET (the volume that would cover one acre to a depth of one foot) OR HECTARE-METER			
LAND APPLICATION	D81	ACRES OR HECTARES			
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY			
SURFACE IMPONDEMENT	D83	GALLONS OR LITERS			

UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE	UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS.....	G	LITERS PER DAY.....	V	ACRE-FEET.....	A
LITERS.....	L	TONS PER HOUR.....	B	HECTARE-METER.....	F
CUBIC YARDS.....	Y	METRIC TONS PER HOUR.....	W	ACRES.....	S
CUBIC METERS.....	C	GALLONS PER HOUR.....	E	HECTARES.....	H
GALLONS PER DAY.....	U	LITERS PER HOUR.....	N		

EXAMPLE FOR COMPLETING ITEM III (shown in line numbers X-1 and X-2 below): A facility has two storage tanks, one tank can hold 200 gallons and the other can hold 400 gallons. The facility also has an incinerator that can burn up to 20 gallons per hour.

LINE NUMBER	A. PROCESS CODE (from item above)	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from item above)	B. PROCESS DESIGN CAPACITY		FOR OFFICIAL USE ONLY
		1. AMOUNT (specify)	2. UNIT OF MEASURE (enter code)				1. AMOUNT	2. UNIT OF MEASURE (enter code)	
X-1	S 0 2	600	G		5	T 0 2	500 (b)	U	
X-2	T 0 3	20	E		6	T 0 3	0.56 (a)	D	
1	S 0 1	284,070 (a) +	G		7	T 0 4	N/A (a)		
2	S 0 2	6,600 (b)	G		8	T 0 4	2,534 (a)	U	
3	S 0 4	25,500 (b) +	G		9	D 8 0	0.71 (b) +	A	
4	T 0 1	7,680 (a)	U		10				

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

- (a) Active units - See Part B Permit application for descriptions
- (b) Inactive units to be closed under interim status - See individual closure plans for descriptions

+ Revised as of November, 1988

See Page 2a of 5 for explanations on process codes

IV. DESCRIPTION OF HAZARDOUS WASTES

A. EPA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.

B. ESTIMATED ANNUAL QUANTITY - For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.

C. UNIT OF MEASURE - For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS.....	P	KILOGRAMS.....	K
TONS.....	T	METRIC TONS.....	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous waste that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
2. In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
3. Repeat row 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO. - X	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES	
				1. PROCESS CODES (enter)	2. PROCESS DESCRIPTION (if a code is not entered in D(1))
X-1	K054	900	P	T03D80	
X-2	D002	400	P	T03D80	
X-3	D001	100	P	T03D80	
X-4	D002				included with above

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- Technical Area 54, Area L
 - Waste transfer, packaging and storage units, used for accumulation, packaging and storage of chemical wastes
 - Treatment tanks, used for the neutralization, precipitation, oxidation and evaporation of various wastes.

Most of the above units have interim authority status. These units are described in the following sections.

2.1.1 Miscellaneous Units

Miscellaneous units used for both the open burning and the detonation of reactive wastes and waste high explosives (HE) are located at several Technical Areas in the Laboratory. These units are described in the following sections.

2.1.1.1 Technical Areas 14 and 16 Open Burning Units

Four types of open burning units are located at the TA-16 burning ground: a flash pad, where any HE contamination is removed from excess equipment or scrap generated within the Technical Area; two burn pads for the destruction of solid HE material; a pad with trays where HE-contaminated waste oil is burned; and two pressure vessels for reacting HE-contaminated sludge.

A 100-foot square cyclone fence surrounds the flash pad area, which is covered with sand. Material to be flashed is placed on the pad with additional fuel, if necessary, to maintain the burn until all HE has been reacted. The scrap material is then handled as solid waste.

The two burn pads, each surrounded by a 100-foot square cyclone fence, are used to destroy solid chunks of excess or off-specification HE and machine turnings. The material is placed on a sand-filled steel table lined with refractory brick and ignited.

Used oil and/or solvent which may be contaminated with HE is poured into metal trays lined with fire brick. The trays are located within a sand-filled steel tray. The oil is ignited using a remotely-operated "electric match." Approximately 100 gallons of oil are burned each month.

TA-14 includes one open burning unit which consists of a small burn cage placed within a metal tray. Combustible materials potentially contaminated with experimental HE which cannot be safely transported to the TA-16 incinerator are burned in this cage.

HE-contaminated wash water is collected in sumps at HE fabrication facilities located in several Technical Areas. HE settles out of the wash water, is collected in a vacuum truck and is taken to TA-16 for treatment. When barium is used in the formulation process, it must be precipitated out of the waste water as insoluble barium sulfate, and is collected with the waste HE in a vacuum truck. The collected sludge is gravity fed from the vacuum truck to one of two pressure vessels buried in the ground. Up to 750 pounds of sludge, estimated by the depth of the sludge material in the pressure vessel, can be burned at one time. The vessels contain sand and gravel, and a fluid drain connects the base of the cone-shaped vessel to a carbon-filter wastewater treatment unit (TA-16-228) located nearby. Treated effluent is regulated by a NPDES permit (NM 0028355).

2.1.1.2 Technical Areas 14, 15, 36, and 39 Open Detonation Units

Open detonation sites used for the destruction of excess or waste HE are located at Los Alamos in Technical Areas 14, 15, 36, and 39. These sites are used routinely to detonate scrap HE, failed experimental detonations, unneeded classified explosives shapes, and small quantities of reactive chemicals. These sites consist of detonation points on the open ground, often located within a small canyon. Material to be detonated is placed on sand or on a wooden table at the firing point and is detonated with a remote firing mechanism. Associated facilities at these sites include bunkers which are occupied by technical personnel during detonations. Prior to all firings, nearby roads are checked and kept clear.

2.1.2 Technical Area 16 Industrial Incinerator

A baffled single chamber industrial incinerator, equipped for combustion of potentially HE-contaminated trash and machine oil, is located outdoors in the northeastern part of Technical Area 16 (Figure 2-22). The incinerator, which consists of primary and secondary combustion chambers is capable of burning 810 pounds of Type Zero trash (as defined by the Incinerator Institute of

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4.6.1 Current Management Practices

The TA-16 incinerator is located within a high security/controlled access area within TA-16. The area is patrolled by Los Alamos security personnel during unattended hours. The incinerator is used primarily to dispose of approximately 3,200 pounds per day (four loads) of potentially HE-contaminated, Type "Zero" trash and small amounts of waste oil. Only wastes described by NMHWMR Sections 206.D.8.a.(2)(a)(i), (ii), (iii), or (iv) [40 CFR§ 264.340(b)(1)(i), (ii), (iii), or (iv)], and that contain insignificant concentrations of hazardous constituents listed in 201 Appendix III [40 CFR Part 261, Appendix VIII], are disposed of in the TA-16 incinerator.

Trash is loaded into the primary chamber by a front-end loader. The burn cycle is then initiated. After the burn and cool-down cycles are complete, ash is removed from the settling chamber by shovels, hoes, and other common hand tools. Waste ash is placed into 55-gallon drums and transferred to the TA-54 Area L storage units.

The ash is then mixed with cement and disposed of in accordance with its hazard characteristics. Each 810-pound burn produces approximately four cubic feet of ash.

4.6.2 Secondary Containment Areas

Because only small amounts of liquid (less than 10 gallons per month) are to be handled at the TA-16 incinerator, secondary containment areas are not required for safe operation of the systems. The incinerator itself is situated on a concrete pad, and thus any small drips and spills of liquid will be retained in the area and cleaned up.

4.7 TA-14 AND TA-16 OPEN BURNING UNITS

The ~~burning units are used to dispose of~~ such as ~~paper, tape, and other~~ items potentially contaminated with experimental HE. These materials are not transported to TA-16 for incineration for any of the following reasons:

1. The HE may be very sensitive and considered unsafe for transport or treatment at TA-16.
2. Compatibility of the experimental HE with explosives or solvents present in TA-16 waste is unknown.

The cage is a small metal cylinder approximately two feet tall and two feet in diameter covered by a wire mesh screen. Approximately two cubic feet of contaminated combustibles are disposed of in the burn cage every two months. The cage sits within a steel tray on the soil surface. The cage and tray are covered when not in use.

HE contaminated combustible material generated at TA-14 is not sent to the TA-16 incinerator because of the nature of the experimental HE formulated at TA-14. ~~Explosives are extremely sensitive and can be~~

~~Often the HE waste is considered too sensitive to be~~ Often the HE waste is considered too sensitive to be transported to another Technical Area. The compatibility of the experimental HE with other explosives or solvents handled at TA-16 may not be known, and disposal in the TA-14 burn cage is considered appropriate for this HE contaminated waste.

The burning grounds at TA-16 contain six units in which HE-contaminated waste materials are burned to completely react the HE components. The six units fall into four different types of open burning pads; the "flashing" pad (TA-16-387), the open burn tables (TA-16-388 and -399), the liquid (oil/solvent) burn tray (TA-16-394), and the pressure vessels (TA-16-401 and -406). The construction of each type of unit is described below.

The flash pad (TA-16-387) and the two open burn pads tables (TA-16-388 and -399) are each located within a 100-foot by 100-foot cyclone fence. The flash pad consists of a layer of sand several inches thick over the soil surface. The excess equipment and noncombustible material to be flashed is placed in the center of the fenced area. The two open burn pads each contain a metal table which stands approximately two feet off the ground. Each table is approximately 21 feet long and 3 feet wide. A sloped steel cover can be wheeled into place over each table when it is not in use. The flashing pad does not include any trays or covers.

The liquid burn unit, designated TA-16-394, consists of a 12-foot by 12-foot by 1-foot metal tray filled with sand to a depth of six to eight inches. The tray contains four shallow steel pans lined with fire brick. The four smaller

pans each have a sloped steel cover which is moved into place when the trays are not in use. Waste HE-contaminated oil/solvent is poured into the four smaller pans and ignited.

The pressure vessels (TA-16-401 and -406) are cone-shaped, steel containers approximately eight feet in diameter and ten feet deep which are set into the ground. Each vessel narrows at the base and is connected to a fluid drain which transports liquid from the cone to the carbon filter wastewater treatment unit (TA-16-228) nearby. Each cone contains a surface layer of sand overlying layers of fine and then coarse gravel.

4.7.1 Current Waste Management Practices

The burning ground at TA-16 is managed by WX-3, the Service Organization of Division WX, responsible for the safe treatment and handling of HE-contaminated waste material generated by the WX HE production facilities at TA-16. The group is also responsible for the safe handling of some HE-contaminated materials generated by M Division, the group responsible for HE Research and Development. Several kinds of HE-contaminated waste materials are reacted at the burning ground and include the following:

- Inert - mock explosives, may contain oxidizers
- Solid chunk - includes consolidated turnings, reject parts, and excess HE
- Sludge - HE-contaminated sludge which settles out of contained wash water from research and fabrication laboratories
- Waste Oil/Solvents - assumed to be contaminated with HE
- Scrap - any machinery, equipment, or furniture used in the Area is considered contaminated with HE and is not allowed out of the Area until the HE has been removed.

Administrative controls within M and WX Divisions ensure that the chemical composition of every HE developed or routinely used at the Laboratory is known. In addition, the compatibility of each HE with other HE compounds and with any solvents or bonding agents with which it may be used is determined by the research group before the HE is routinely used at the laboratory. Experimental HE developed by M Division may not be totally characterized during development, but the management of that waste is controlled by M Division.

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MEMORANDUM

ERM/GOLDER FEDERAL SERVICES LOS ALAMOS PROJECT TEAM

To: P. Shanley

Fr: B. Russell 

Date: 06 July 1994

Re: WASTE CHARACTERIZATION ANALYSES ASSOCIATED WITH SWMU 0 - 030(g) FIELD OPERATIONS FROM JUNE - AUGUST 1993

Pursuant to your request, I have prepared this memorandum to provide a brief response to an observation reported by the NEIC Multi-Media Team, from their surveillance of field operations last August, and transmit a copy of the SWMU 0-030(g) analytical sample data matrix prepared for internal tracking of laboratory results. Please do not hesitate to call me if you need additional information or further clarification.

As I understand the comments in the NEIC report, LANL has been requested to respond to the observation that several soil samples collected from SWMU 0-030(g) should have been submitted for TCLP analyses prior to disposal of the materials at TA-54. Specifically, seven samples were not submitted for TCLP analysis when the total value, for either lead or mercury, was equal to or greater than 20 times the TCLP threshold. In the case of TCLP analyses for lead, TCLP should have been conducted whenever the total lead concentration was equal to or greater than 100 ppm and 4 ppm for mercury..

In fact, LANL did request TCLP analyses on all seven of the subject samples, but due to limitation in sample size or loss of the sample by the analytical laboratory, the sample materials were not available to complete the requested analysis. Due to the unfortunate loss of the sample materials, LANL utilized the available data set for total lead and total mercury and the corresponding TCLP data to evaluate the potential for the excavated soils to represent a RCRA hazardous material.

The relationship between lead_{TCLP} and lead_{Total} was determined and found to range from 0.0011 to 0.002. These values were calculated from the following data:

Lead _{Total}	Lead _{TCLP}	Lead _{TCLP} /Lead _{Total}
200 ppm	0.11 ppm	0.00055
610 ppm	0.07 ppm	0.00011
15 ppm	0.03 ppm	0.002
16 ppm	0.03 ppm	0.002

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TEAM

17 ppm

0.03 ppm

0.002

Utilizing the 0.002 factor for leadTCLP/leadTotal, it would have been necessary for the total lead content to be 2,500 ppm or greater before the lead TCLP threshold value (5.0 ppm) would be exceeded. The total lead content for the five samples missing the TCLP analyses were:

AAA 4349	300 ppm
AAA 4363	290 ppm
AAA 4364	110 ppm
AAA 4365	190 ppm
AAA 4366	490 ppm

Applying the leadTCLP/leadTotal factor to the above total values, the calculated TCLP test results would have been:

AAA 4349	0.6 ppm
AAA 4363	0.6 ppm
AAA 4364	0.2 ppm
AAA 4365	0.4 ppm
AAA 4366	1.0 ppm

As shown above, the TCLP threshold for lead (5.0 ppm) would not have been achieved. In all but one case, the results are approximately an order of magnitude below the threshold value.

A corresponding set of data was used to correlate total mercury with the mercury TCLP values. The corresponding range in mercuryTCLP/mercury Total ranged from 0.0001 to 0.0009. Utilizing the 0.0009 factor for mercury TCLP/mercuryTotal, it would be necessary for the total mercury content to be greater than 4,000 ppm. The total mercury in the sample AAA 4355 was 5.5 ppm. The corresponding calculated TCLP value would be 0.0050 ppm, two orders of magnitude below the TCLP threshold value.

A mercury TCLP analysis was performed on the aliquot sample of the sludge and did not exceed the TCLP threshold value for mercury.

The above process was used to assist with the disposition of the materials excavated from the SWMU for those samples that were missing the lead TCLP results..

The attached spread sheet, dated 19 October 1994, provides all the data, available at that time for the materials collected from SWMU 0 - 030(g). The spread sheet acknowledges, in the "TCLP Results" column those situations that involved TCLP analyses that were requested, but not performed.

Attachments: As Stated

**ERM/GOLDER FEDERAL SERVICES LOS ALAMOS PROJECT
TEAM**

cc: J. Aldrich, LANL
A. Funk
J. Novak, LANL
Project File

**ERM/GOLDER FEDERAL SERVICES LOS ALAMOS PROJECT
TEAM**

FAX

CST-7L

Chemical and Mixed Waste Operations

Date: 7/25/94

To: Tony Grieggs

Fax No: 7-5224

Phone No.: _____

SUBJECT: LDR reference number table
for NEIC Finding # 10

From: John Kelly

Fax No.: (505) 665-3961

Phone No.: (505) 667-7579

No. of Pages (Inc. Cover): 2

Los Alamos
NATIONAL LABORATORY
memorandum

*Chemical Science and Technology
Responsible Chemistry for America*

CST-7L Chemical, Mixed Waste and
Decontamination Operations
Los Alamos, New Mexico 87545

To/MS: Tony Grieggs, ESH-8, K498
From/MS: John Kelly, CST-7, J593
Phone/FAX: 667-7579/665-3961
Symbol: CST-7L-94-271
Date: July 22, 1994

JCK

SUBJECT: RESPONSE TO NEIC FINDINGS REPORT

In response to finding 94-06 of the NEIC report dated June 28, 1994, I have attached copies of the Land Disposal Restriction Notification forms that were alleged to be missing from the Waste Management file storage. For the shipment on July 30, 1992, the LDR notification can be found in attachment 1. For the shipment of May 5, 1992, the LDR notifications are present in attachment 2. For the shipment originating on August 4, 1992, the LDR notifications are given in attachment 3. And lastly, for the shipment on September 24, 1992, the LDR notifications can be found in attachment 4.

There are two reasons why I believe there was a discrepancy on whether or not the notifications were present. First, the auditors did not realize that we keep dual storage for these files. Had they come to me with the manifests numbers at the time of the audit, I could have produced these records. In fact, several of the records have a red stamp indicating that they were entered into our backup file storage system (for example, see LDR notifications from August 4, 1992 shipment). Second, some of the LDR notifications did not have the manifest numbers on them (this goes along with Finding 94-06-08 which we do not contest). Therefore, it was difficult for the auditors to correlate which LDR notification went with which manifest. They needed to compare each waste code on the manifest to the corresponding waste code indicated on the LDR form. They simply did not have ample time during the audit to do this.

If you have any questions or need further clarification, please contact me at the above phone number.

JCK:sc
attachments

Cy: Paul Schumann, CST-7, w/o att., E539
CST-7 Group Office Files, w/o att., E517
CST-7L Office Files, w/att., J593

26

November 13, 1991

Memorandum

Subject: Twenty Times Rule-of-Thumb to Determine Waste Characteristic

To: WSMR File

From: Marc Sides,
Environmental Scientist

The following information was compiled at a request from WSMR to determine whether or not waste soil samples, drill cuttings and mud would be considered Toxic by running total analysis of metals (D wastes) in lieu of running the TCLP. Information was received from Margo at the EPA Test Methods Hotline (703) 734-4387.

1. If total concentrations of metals analysis (displayed in units of mg/100 gram sample) when divided by 20 is less than the TCLP regulatory limit for the metal analyzed, then the waste is not Toxic for that metal analyzed. This is simple mathematics because what is not present, can not leach.
2. If a sample in the situation described above is at or above the TCLP regulatory limit, then the sample needs to be run for the TCLP, because it is possible that 100% of the metal could leach. This is a conservative estimate.
3. Background concentrations of metals can not be subtracted from the total metals analysis when applying the 20 times rule, because TCLP is looking for total leachability of metals from the sample, not just the portion that might result from anthropogenic sources.
4. The sample for total metals analysis must be 100% solids for the criteria in #1 and #2 above to be valid. If the sample is part solids and part liquid then the 20 times rule can not be used, because the TCLP preparation and analytical methods for liquid portions of samples is different than those for solids.
5. The EP test is invalid and was superseded by the TCLP.
6. When applying the 20 times rule, a prudent question for the regulator to ask is, "What is the recovery on standards?" (i.e., if the matrix spike recovery is 50% to 80% then the sample results for total metals may need to be adjusted before the total concentrations are divided by 20 and compared to the TCLP regulatory threshold. See the Method in Section 8 of SW-846)

DX-10: SOP 196 Original	TREATMENT OF WASTE WATER FROM PRINTED CIRCUIT SHOP	05/05/94 Page 1 of 8
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DX-10

STANDARD OPERATING PROCEDURE

ROUGH DRAFT

FOR

**TREATMENT OF WASTE WATER FROM PRINTED
CIRCUIT SHOP**

SOP 196

Prepared by: _____ Date: _____
Robert Fresquez

Approved by: _____ Date: _____
DX-10 Group Leader

Approved by: _____ Date: _____
DX-DO

Approved by: _____ Date: _____
ESH-5

Final Approval: _____ Date: _____
DX-10 ES&H Officer

ROUGH DRAFT

This SOP has been approved by DX-10 and DX-Division Office. If within 30 days we have not heard from ESH-5 and other reviewing Groups as determined by ESH-5, this SOP will be considered approved and will be used as written.

05/05/94 Page 4 of 8	TREATMENT OF WASTE WATER FROM PRINTED CIRCUIT SHOP	DX-10: SOP 196 Original
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- Exposure to strong acids that could: cause skin, eye, mucous membrane and respiratory tract irritation; attack clothing; damage equipment.
- The release of waste matter into the environment through spillage.

6.2 Emergency Procedures

6.2.1 In the event of an emergency, the Building/Site Emergency Plan will be followed. The Building/Site Emergency Plan shall be available in the building and operators shall be familiar with its contents.

6.2.2 In all emergencies, first call 911, then notify group management as soon as possible.

6.2.3 If a spill occurs, notify the Group Spill Control Coordinator.

7.0 PROCEDURAL STEPS

7.1 Necessary Equipment

Required safety gear and equipment must be present and in use before any part of the operation may proceed. Group management shall provide the required equipment to safely perform the operation and insure all safety requirements are met. This equipment will be:

- Drum pump, modified version, with handle extension on the pump used for reaching the bottom of the tank
- Empty plastic drums
- Spill kits
- Chemical absorbent pillows and socks (for creating secondary containment area where drums will be filled)
- Drum-handling hand truck (dolly and drum wrench)
- Personal protective equipment
- Radio - used as a means of instant communication to the group office should an unexpected situation occur
- **EMERGENCY EYEWASH AND SHOWER** (These are located in the same room, B160)
- Equipment for handling calcium hydroxide (large scoop)
- pH measuring equipment (pH meter or pH paper)

7.2 Tank #1

The purpose of tank #1 is to be used as a holding tank for the waste water.

ROUGH DRAFT

ROUGH DRAFT

Los Alamos
NATIONAL LABORATORY
memorandum

Dynamic Experimentation Division
DX-10 Detonation Systems

To/MS: M. Cash, ESH-8 MS K498

Thru: D. Griechen, DX-DO MS P942

From/MS: G. Vasilik, DX-10 MS P950-01

Phone/FAX: 7-9293/7-6301

Symbol: DX-10-94330-

Date: July 19, 1994

SUBJECT: Response to EPA on Multi Media Audit Finding

This memo serves as documentation for answering the finding from the EPA Multi Media Compliance Investigation Report (page 33 RCRA-Hazardous Waste Management, Area of Noncompliance - TA-22-91 40CFR 265.32/262.34(a)). No internal communications or alarm system equipment was available which was capable of providing immediate emergency instruction to facility personnel:

Radios were issued on March 16, 1993 to the section that operates/inspects the treatment area and the <90 day storage area at TA-22-91. At this time, I instructed the operators/inspectors that they must have communication equipment with them whenever they are performing an operation or inspection at the treatment area and the <90 day storage area. The operators/inspectors were also instructed to have communication equipment with them during operations/inspections at the LANL-required RCRA training (received 4/29/93, and updated annually). These same requirements are reinforced in the draft SOP governing the printed circuit shop operations at TA-22-91 (DX-10-SOP-196, final approval expected in August or September 1994). The LANL ES&H Manual (AR-10-3 Appendix B Revision Dec. 7, 1992, Generator Requirements For Temporary On Site Storage Of Hazardous Waste) also states that communication equipment is required.

Anytime operators/inspectors are performing an operation or inspection at the treatment area or <90 day storage area, they carry a radio with them for instant communication with facility personnel. These radios provide direct communication to the Group Office as well as direct communication to the LANL Emergency Network.

Attached to this memo you will find the maps showing the location of the safety equipment you requested. I have listed the location of the closest phones, fire hydrants, fire alarms, and fire extinguishers to the <90 day storage area.

If you have any questions, please contact me at 667-9293 or 667-6604.

Cy: DX-10 Files
DX-10 Files(ES&H)
D. Griechen, DX-DO, MS P942
J. McAfee, DX-10, MS P950

Los Alamos

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Battery

memorandum

TO: Group Waste Coordinators

DATE: December 23, 1991

THRU: Tom Gunderson, EM-DO, MS K491

MAIL STOP/TELEPHONE: E5177-7391
K490/5-0455

FROM: Anthony Drypolcher, EM-7 *Anthony D. Drypolcher*
Juan Corpion, EM-8 *JC*

SYMBOL: EM-8:91-874

SUBJECT: **MANAGEMENT OF LITHIUM, MERCURY, SILVER, NICKEL-CADMIUM AND GEL-CELL BATTERIES**

Lithium, mercury, silver, nickel-cadmium and gel-cell batteries used for small electronics have been found to contain heavy metals such as mercury, cadmium and silver above regulatory levels for hazardous waste. While the disposal of a few of these batteries as nonhazardous refuse is unlikely to lead to significant amounts of heavy metals leaching into the environment, the combined generation of this waste at the Laboratory may represent a substantial volume. Therefore, effective immediately, the disposal of lithium, mercury, silver, nickel-cadmium and gel-cell batteries into trash cans and dumpsters (radioactive or nonradioactive) is controlled.

Alkaline and carbon batteries have not been found to contain regulated amounts of heavy metals or other constituents and may continue to be disposed as trash (i.e. nonhazardous solid waste). Furthermore, this guidance does not apply to lead-acid batteries which are hazardous waste and recycled through Johnson Controls, Incorporated (JCI) under a contractual agreement.

In order to facilitate removal of lithium, mercury, silver, nickel-cadmium and gel-cell batteries, we recommend that a small DOT-approved, steel or polyethylene container (for example, Lab Safety Supply nos. RC-4310 or RC-8934 on page 292 in the 1991 Catalog) with a volume no greater than 5 gallons be used. The container should be placed in the nearest designated satellite accumulation area, in accordance with Administrative Requirement (AR) 10-3 (contact EM-8 for assistance). **HAZARDOUS WASTE - SPENT BATTERIES** and accessible to all employees.

If you have any questions regarding this matter, feel free to call or drop Juan Corpion a note in **INFORM**.

TCG/JCC:smm

Cy: *KMK*
K. Hargis, EM-8, MS K490
J. Carmichael, EM-8, MS K490
A. Grieggs, EM-8, MS K490
A. Gustavson, EM-7, MS J593
CRM-4, MS A150
Circ. File

Los Alamos
NATIONAL LABORATORY

memorandum

NONPROLIFERATION AND INTERNATIONAL SECURITY
Space & Atmospheric Sciences, NIS-1

To/MS: Liz English, ICF Kaiser Engineers, Inc.

From/MS: Juan Baldonado, NIS-1, MS D466 *JAB*

Phone/FAX: 5-3823/FAX 5-7395

Symbol: NIS-1:94-652

Date: July 28, 1994

Subject: RESPONSE TO REPORTED FINDING

This memorandum is in response to a "finding" reported to me in a report dated July 21, 1994 concerning an EPA multi-media investigation that took place August 2 through 12, 1993.

The finding states: "Three separate laboratories were using one accumulation area in Building 40, Room W112; this area was also not in control of the operator producing the hazardous waste."

My understanding as to the content of the finding is the distance between the satellite storage area in Room W112 and the other two contributing laboratories, N120 and S104, is too great as explained by Liz English.

I have questioned EM-8, as well as Liz English, as to the "legal distance" for waste accumulation in a case like this and got no solid answer. This was also brought up during the time we were establishing our satellite storage in W112 and planning to use this as our central collection point for our three laboratories within SM 40.

I will simply state facts as to the way our hazardous waste stream is controlled.

- 1) our waste is generated and handled in accordance with WPRF 4274.
- 2) we were allowed to use one point of satellite storage for three laboratories within SM40 west and south wings, we chose Room W112. This room has a limited access key.
- 3) the laboratories N120 and S104 have cipher locks on them to prevent any nondescribed waste as per WPRF 4274 from entering our waste management stream.
- 4) I am the waste generator as well as the person in charge of waste collection and transport to the satellite storage container in Room W112.

All of these conditions have been in effect since day one of our satellite storage area and waste management system and were being followed at the time of the EPA multi-media investigation! We were also commended for doing a good job with our satellite storage recently, as per a memorandum from DOE, AOO, LAAO dated June 14, 1994 signed by Jon Mack, Waste Management, ES&H Branch.

JRB:ko

OU 1071, SWMU 6-20M
 SAMPLE INVENTORY
 10/1993

Sample ID	DM-9 Request Number	Sample Matrix	Analysis Requested	Date Collected	Sample Location	Date Data Validated	Radionuclide Results (pCi/g)			Isotopes		TMI Results (Total)	Metals		TCF Results	SWCC and VOCs Results	Particulates Results	PCBs Results
							U-235	U-238	U-234	Uranium Series	LANL Screening Action Levels (dpm)		Background Levels for the Los Alamos Area	LANL Screening Action Levels (dpm)				
AAA1804	10070 M 10076 B 10078 V SV, M, B	Soil	Radon, R, M, P, SV, V, PCB	07/29/93	Division of engine work, E doubler, NE corner	01/09/93 R 7/19/93 M 06/09/93 SV 6/31/93 V	43.1	23.8	1.4	Uranium Series Am-241 - 10.19 pCi/g Cs-137 - 0.26 pCi/g Cm - 0.0 pCi/g K-40 - 18.86 pCi/g Ra-226 - 0.71 pCi/g Th-232 - 0.00 pCi/g U-238 - 0.18 pCi/g U-235 - 3.98 pCi/g RFB Total U - 13.2 mg/kg RAD Po-210 - 3.44 pCi/g Po-210 - 397.09 pCi/g Am-241 - 0.33 pCi/g K-40 - 0.11 pCi/g	Am-241 - 23.0 pCi/g Cs-137 - 4.0 pCi/g None None Ra-226 - 0.71 pCi/g Th-232 - 0.00 pCi/g U-238 - 0.18 pCi/g U-235 - 1.0 pCi/g Total U - 13.2 mg/kg RAD Po-210 - 27.0 pCi/g Po-210 - 34.0 pCi/g Am-241 - 23.0 pCi/g Sr-90 - 0.9 pCi/g	Ag - 1.0 ppm Al - 1000 ppm Ba - 20 ppm Be - 0.70 ppm Bi - 0.00 ppm Ca - 1000 ppm Cd - 1 ppm Co - 1.0 ppm Cr - 0.1 ppm Cu - 1.0 ppm Fe - 0.200 ppm K - 470 ppm Mg - 400 ppm Mn - 200 ppm Mo - 1.00 ppm Ni - 0.3 ppm Pb - 310 ppm Sb - 0.1 ppm Tl - 0.1 ppm V - 3.0 ppm Zn - 110 ppm	Ag - 1.0 to 1.0 ppm Al - 0.000 to 111000 ppm Ba - 120.0 to 020.0 ppm Be - 1.0 to 0.4 ppm Bi - 1911 to 00100 ppm Ca - 1.2 to 1.7 ppm Co - 0.0 to 21.0 ppm Cr - 3.03 to 71.1 ppm Cu - Not reported Fe - Not reported K - 10000 to 0000 ppm Mg - 1331 to 0370 ppm Mn - 105.7 to 1532 ppm Mo - 3.700 to 23500 ppm Ni - Not reported Pb - 10.0 to 36.0 ppm Sb - 0.27 to 1.79 ppm Tl - Not reported V - 11.3 to 113.1 ppm Zn - 19.5 to 100.2 ppm	Ag - 0.0 ppm Al - Not Ba - 500 ppm Be - 0 to 0 ppm Bi - Not Ca - Not Cd - 10 ppm Co - Not Cr - Not Cu - Not Fe - Not K - Not Mg - Not Mn - Not Mo - 500 ppm Ni - Not Pb - 300 ppm Sb - 31 ppm Tl - 0.4 ppm V - 300 ppm Zn - 0.000 ppm	None above MDA or LANL SALS, no soil concentrations that require TCF analysis	None above MDA or LANL SALS, no soil concentrations that require TCF analysis	None above MDA or LANL SALS, no soil concentrations that require TCF analysis	None above MDA or LANL SALS, no soil concentrations that require TCF analysis

DU 1071, SWMU 0-030(g)
SAMPLE INVENTORY

10/19/93

Sample ID	Location	Date	Description	Depth	Volume	Concentration	Notes									
AAA 1905	14950 M 14926 R 14910 V, SV, PCB	6/22/93	Radon, R, M, P, SV, V, PCB	Bottom of optic tank, E chamber, SE corner	0/1993-R 7/1/93-M 9/8/93-SV 6/24/93-V	20 30 14 90 7 00	Gamma Scan: Am-241 - 5.2 pCi/g Co-137 - 0.51 pCi/g Cs-137 - 0.0 pCi/g K-40 - 24.86 pCi/g Ra-226 - 1.75 pCi/g * Th-232 - 2.71 pCi/g * U-234 - 10.5 pCi/g U-235 - 1.09 pCi/g N.P.H.S. Total U - 1.1 mg/kg RSE Pu-238 - 0.00 pCi/g Pu-239 - 22.65 pCi/g Am-241 - 0.17 pCi/g PC Sr-90 - 0.1 pCi/g	Ag - 1.0 ppm Al - 5000 ppm Ba - 45 ppm Be - 0.05 ppm Ca - 1000 ppm Cd - 0.4 ppm Co - 1.0 ppm Cr - 2.7 ppm Cu - 5.4 ppm Fe - 4900 ppm K - 570 ppm Mg - 640 ppm Mn - 210 ppm Mo - 190 ppm Ni - 2.7 ppm Pb - 9 ppm Sb - 30 ppb Ti - 40 ppb V - 7.1 ppm Zn - 90 ppm Hg - 0.19 ppm	Ag - 1.6 to 1.6 ppm Al - 49000 to 113000 ppm Ba - 124.0 to 820.9 ppm Be - 1.0 to 4.4 ppm Ca - 1911 to 80500 ppm Cd - 1.2 to 1.7 ppm Co - 0.4 to 23.4 ppm Cr - 2.03 to 71.1 ppm Cu - Not reported Fe - 10000 to 40000 ppm K - 10700 to 42000 ppm Mg - 1331 to 16700 ppm Mn - 105.7 to 1572 ppm Mo - 2700 to 32500 ppm Ni - Not reported Pb - 10.0 to 56.0 ppm Sb - 0.27 to 1.59 ppm Ti - Not reported V - 11.3 to 113.1 ppm Zn - 19.9 to 146.2 ppm Hg - Not reported	Ag - 400 ppm Al - None Ba - 5600 ppm Be - 0.16 ppm Ca - None Cd - 80 ppm Co - None Cr (VI) - 400 ppm Cu - 3000 ppm Fe - None K - None Mg - None Mn - 8000 ppm Mo - None Ni - 1600 ppm Pb - 300 ppm Sb - 32 ppm Ti - 6.4 ppm V - 560 ppm Zn - 10000 ppm Hg - 24 ppm	No total metals concentrations that require TCLP analysis	None above MCLs or LAMB SALS, no total concentrations that require TCLP analysis				
AAA 1906	14950 M 14926 R 14910 V SV, PCB	6/22/93	Radon, R, M, P, SV, V, PCB	Duplicate of AAA 1905	0/1993 R 7/1/93 M 9/8/93 SV 6/24/93 V	22 50 35 00 0 10	Gamma Scan: Am-241 - 7.22 pCi/g Co-137 - 0.67 pCi/g Cs-137 - 0.0 pCi/g K-40 - 22.51 pCi/g Ra-226 - 1.62 pCi/g * Th-232 - 1.60 pCi/g * U-234 - 40.1 pCi/g U-235 - 1.04 pCi/g N.P.H.S. Total U - 2.5 mg/kg RSE Pu-238 - 0.01 pCi/g Pu-239 - 11.30 pCi/g Am-241 - 0.16 pCi/g PC Sr-90 - 0.17 pCi/g	Ag - 1.0 ppm Al - 6100 ppm Ba - 39 ppm Be - 0.07 ppm Ca - 1000 ppm Cd - 0.4 ppm Co - 0.9 ppm Cr - 2.1 ppm Cu - 4.0 ppm Fe - 4600 ppm K - 530 ppm Mg - 560 ppm Mn - 160 ppm Mo - 120 ppm Ni - 2 ppm Pb - 0 ppm Sb - 30 ppb Ti - 40 ppb V - 4 ppm Zn - 70 ppm Hg - 0.1 ppm	Ag - 1.6 to 1.6 ppm Al - 49000 to 113000 ppm Ba - 124.0 to 820.9 ppm Be - 1.0 to 4.4 ppm Ca - 1911 to 80500 ppm Cd - 1.2 to 1.7 ppm Co - 0.4 to 23.4 ppm Cr - 2.03 to 71.1 ppm Cu - Not reported Fe - 10000 to 40000 ppm K - 10700 to 42000 ppm Mg - 1331 to 16700 ppm Mn - 105.7 to 1572 ppm Mo - 2700 to 32500 ppm Ni - Not reported Pb - 10.0 to 56.0 ppm Sb - 0.27 to 1.59 ppm Ti - Not reported V - 11.3 to 113.1 ppm Zn - 19.9 to 146.2 ppm Hg - Not reported	Ag - 400 ppm Al - None Ba - 5600 ppm Be - 0.16 ppm Ca - None Cd - 80 ppm Co - None Cr (VI) - 400 ppm Cu - 3000 ppm Fe - None K - None Mg - None Mn - 8000 ppm Mo - None Ni - 1600 ppm Pb - 300 ppm Sb - 32 ppm Ti - 6.4 ppm V - 560 ppm Zn - 10000 ppm Hg - 24 ppm	No total metals concentrations that require TCLP analysis	None above MCLs or LAMB SALS, no total concentrations that require TCLP analysis				
E cham, M, E		6/23/93	Radon, SV, V	E chamber, N end, 6 R BGS	6/24/93-SV 6/24/93-V	2 90 6 30 1 10								None above MCLs or LAMB SALS, no total concentrations that require TCLP analysis		
Bottom, under E wall		6/23/93	Radon, SV, V	Bottom of enclosure, under E wall	6/24/93-SV 6/24/93-V	20 30 36 30 1 70									None above MCLs or LAMB SALS, no total concentrations that require TCLP analysis	

OU 1071, SWMU 0-036D
SAMPLE INVENTORY

10/1993

Sample ID	Material	Depth	Location	Date	Notes	As - 0.2 ppm	Hg - 1.3 ppm	Sr - 0.2 ppm	Hg - 1.2 ppm	As - 0.40 ppm	Hg - 2.4 ppm	Sr - 0.02 ppm	Hg - 2.4 ppm	Remarks
AAA 1371	Soil		Radon	7/9/93	W chamber, E central hole, 2.0 BUCS	20.10	19.50	1.20	1.20					
AAA 1372	Soil		Radon	7/9/93	Drugs of concrete rubble, central hole, upper hole	0.00	1.20	0.00	0.00					
AAA 1373	Soil		Radon	7/9/93	Drugs of concrete rubble, central hole, upper hole	0.40	2.40	0.20	0.20					
AAA 1374	Soil		Radon	7/12/93	W chamber, NW corner of S and, upper 2.0 BUCS	0.00	4.30	0.50	0.50					
AAA 1375	Soil		Radon	7/12/93	W chamber, SW corner of S and, upper 2.0 BUCS	10.90	11.10	1.10	1.10					
AAA 1376	Soil		Radon	7/12/93	W chamber, SE corner of S and, upper 2.0 BUCS	11.20	17.90	1.90	1.90					
AAA 1377	Soil		Radon	7/12/93	W chamber, NW corner of S and, upper 2.0 BUCS	11.70	23.70	0.00	0.00					
AAA 1378	Soil		Radon	7/12/93	W chamber, S central hole, 0 BUCS	1.60	1.70	0.10	0.10					
AAA 1381	Soil		Radon	7/9/93	E chamber, W central hole, 0.8 BUCS	16.90	12.50	0.70	0.70					
AAA 1382	Soil		Radon	7/9/93	E chamber, W central hole, 2.0 BUCS	16.90	18.40	0.10	0.10					
AAA 1383	Soil		Radon	7/9/93	W chamber, E central hole, 6 in BUCS	22.70	21.00	1.90	1.90					
AAA 1384	Soil		Radon	7/9/93	W chamber, E central hole, 2.0 BUCS	22.70	0.20	1.00	1.00					
AAA 1385	Soil		Radon	7/9/93	W chamber, E central hole, 2.0 BUCS	20.10	14.50	2.00	2.00					
AAA 1386	Soil		Radon	7/9/93	W chamber, W central hole, 2.0 BUCS	22.50	21.00	2.90	2.90					
AAA 1387	Soil		Radon	7/9/93	W chamber, S central hole, 2.0 BUCS	1.60	5.10	1.00	1.00					
AAA 1388	Soil		Radon	7/9/93	W chamber, S central hole, 2.0 BUCS	1.60	10.70	0.20	0.20					
AAA 0331	Soil		Radon	7/12/93	W chamber, S central, 1.8 BUCS	16.90	6.30	2.10	2.10					
AAA 0332	Soil		Radon, M	7/12/93	Lab 1, composite, central 1/3 of hole	20.10	10.50	2.70	2.70					
AAA 0333	Soil		Radon, M	7/12/93	Lab 2, central 1/3 of hole, NE corner of lab	16.90	20.30	1.00	1.00					

OU 0071, SWM# 0-0062
 SAMPLE INVENTORY

10/19/93

AAA 0136	13127 M	Soil	Radon, M (Hg & Pb only)	716093	1.00 3, unroofed 1/7 of back, NW corner of lot	716093-Hg	16.90	13.00	1.70	Ag - 1.0 ppm Al - 1900 ppm As - 1.7 ppm Ba - 46 ppm Be - 0.75 ppm Bi - 1900 ppm Cd - 0.7 ppm Co - 1.3 ppm Cr - 12 ppm Cu - 4.7 ppm Fe - 3100 ppm K - 610 ppm Mg - 550 ppm Mn - 200 ppm Mo - 70 ppm Ni - 7 ppm Pb - 31 ppm Sb - 70 ppm Se - 0.1 ppm Si - 100 ppm V - 5 ppm Zn - 61 ppm Hg < 0.1 ppm (Hg & Pb only)	Ag - 1.0 to 1.0 ppm Al - 6000 to 11000 ppm As - 1.2 to 10.0 ppm Ba - 124.0 to 570.0 ppm Be - 1.0 to 4.4 ppm Bi - 1911 to 60300 ppm Cd - 0.2 to 1.7 ppm Co - 0.6 to 21.4 ppm Cr - 2.03 to 71.1 ppm Cu - Not reported Fe - Not reported to 400.00 ppm K - 10100 to 13000 ppm Mg - 1331 to 16700 ppm Mn - 103.7 to 1532 ppm Mo - 3.100 to 33500 ppm Ni - Not reported Pb - 18.0 to 36.0 ppm Sb - 0.37 to 1.30 ppm Se - Not reported Si - Not reported V - 11.5 to 117.1 ppm Zn - 19.9 to 106.3 ppm Hg - Not reported Pb - 10.0 to 36.0 ppm Hg - Not reported	Ag - 400 ppm Al - None As - 0.40 ppm Ba - 3400 ppm Be - 0.16 ppm Bi - None Cd - None Co - None Cr (VI) - 400 ppm Cu - 1000 ppm Fe - None K - None Mg - None Mn - 2000 ppm Mo - None Ni - 1400 ppm Pb - 100 ppm Sb - 33 ppm Se - 400 ppm Si - 6.4 ppm V - 100 ppm Zn - 24000 ppm Hg - 24 ppm	No solid metals concentrations that require TCLP analysis.
AAA 0137	13127 M	Soil	Radon, M (Hg & Pb only)	716093	Section 6, 2 B BK25	716093-Hg	33.00	17.00	1.50	Ag - 10.0 to 36.0 ppm Hg - Not reported	Pb - 100 ppm Hg - 24 ppm	Total Hg & Pb concentrations do not require TCLP analysis.	
AAA 0138	13127 M	Soil	Radon, M (Hg & Pb only)	716093	Section 4, 2 B BK25	716093-Hg	22.90	16.50	0.20	Pb - 10.0 to 36.0 ppm Hg - Not reported	Pb - 100 ppm Hg - 24 ppm	Total Hg & Pb concentrations do not require TCLP analysis.	
AAA 0139	13127 M	Soil	Radon, M (Hg & Pb only)	716093	Section 3, 2 B BK25	716093-Hg	20.10	11.00	1.00	Pb - 10.0 to 36.0 ppm Hg - Not reported	Pb - 100 ppm Hg - 24 ppm	Total Hg & Pb concentrations do not require TCLP analysis.	
AAA 0140	13127 M	Soil	Radon, M (Hg & Pb only)	716093	Section 10, 6 B BK25	716093-Hg	33.70	17.00	0.70	Pb - 10.0 to 36.0 ppm Hg - Not reported	Pb - 100 ppm Hg - 24 ppm	Total Hg & Pb concentrations do not require TCLP analysis.	
AAA 0141	13127 M	Soil	Radon, M (Hg & Pb only)	716093	Section 3, 6 B BK25	716093-Hg	33.70	30.00	0.10	Pb - 10.0 to 36.0 ppm Hg - Not reported	Pb - 100 ppm Hg - 24 ppm	Total Hg & Pb concentrations do not require TCLP analysis.	
AAA 0142	13127 M	Soil	Radon, M (Hg & Pb only)	716093	Section 3, 2 B BK25	716093-Hg	33.20	22.50	0.70	Pb - 10.0 to 36.0 ppm Hg - Not reported	Pb - 100 ppm Hg - 24 ppm	Total Hg & Pb concentrations do not require TCLP analysis.	

OND 1071, SW100 0-3060
SAMPLE INVENTORY

10/19/93

AAA 1910	13764-B 13764-M 13764-P 13765-V SV, PCB	Soil	Radon, R, M, P, SV, V, PCB	0/593	01 / NW corner of tank, W diameter, 18 in below concrete floor	0/1093-B 0/1093-M 0/1793-P 0/1793-SV 9/793-V	11.20	31.00	0.70	Asm-241 - 0.05 pCi/g Po-210 - 0.04 pCi/g Po-210 - 0.04 pCi/g U-238 - 1.41 pCi/g U-235 - 0.11 pCi/g U-234 - 1.41 pCi/g	Ag - 1.0 ppm Al - 5400 ppm As - 1.2 ppm Ba - 24 ppm Be - 0.05 ppm Bi - 3700 ppm Br - 0.0 ppm Ca - 1.1 ppm Cd - 0.0 ppm Co - 0.0 ppm Cr - 0.4 ppm Cu - 0.4 ppm Fe - 0.0 ppm K - 1.0 ppm Mg - 0.0 ppm Mn - 0.0 ppm Mo - 0.0 ppm Ni - 0.0 ppm Pb - 0.0 ppm Sb - 0.0 ppm Se - 0.0 ppm Si - 0.0 ppm V - 0.0 ppm Zn - 0.0 ppm Hg - 0.0 ppm	Asm-241 - 23.0 pCi/g Po-210 - 24.0 pCi/g Po-210 - 27.0 pCi/g U-238 - 39.0 pCi/g U-235 - 10.0 pCi/g U-234 - 86.0 pCi/g	Ag - 1.0 to 1.0 ppm Al - 4000 to 11500 ppm As - 1.2 to 0.0 ppm Ba - 124 to 020.9 ppm Be - 1.0 to 0.0 ppm Bi - 1911 to 00700 ppm Br - 1.2 to 1.7 ppm Ca - 0.4 to 23.4 ppm Cd - 0.0 to 0.1 ppm Co - 0.0 to 0.1 ppm Cr - 0.0 to 0.1 ppm Cu - 0.0 to 0.1 ppm Fe - 0.0 to 0.1 ppm K - 10700 to 00000 ppm Mg - 1371 to 16700 ppm Mn - 105.7 to 1533 ppm Mo - 1700 to 33500 ppm Ni - 0.0 to 0.0 ppm Pb - 10.0 to 36.0 ppm Sb - 0.27 to 1.70 ppm Se - 0.0 to 0.0 ppm Si - 0.0 to 0.0 ppm V - 11.5 to 113.1 ppm Zn - 19.9 to 140.7 ppm Hg - 0.0 to 0.0 ppm	Ag - 0.0 ppm Al - 4000 ppm As - 1.2 ppm Ba - 124 to 020.9 ppm Be - 1.0 to 0.0 ppm Bi - 1911 to 00700 ppm Br - 1.2 to 1.7 ppm Ca - 0.4 to 23.4 ppm Cd - 0.0 ppm Co - 0.0 ppm Cr - 0.4 to 23.4 ppm Cu - 0.0 ppm Fe - 0.0 to 0.1 ppm K - 10700 to 00000 ppm Mg - 1371 to 16700 ppm Mn - 105.7 to 1533 ppm Mo - 1700 to 33500 ppm Ni - 0.0 to 0.0 ppm Pb - 10.0 to 36.0 ppm Sb - 0.27 to 1.70 ppm Se - 0.0 to 0.0 ppm Si - 0.0 to 0.0 ppm V - 11.5 to 113.1 ppm Zn - 19.9 to 140.7 ppm Hg - 0.0 to 0.0 ppm	None above MTHZ or LAMI, SARA, or total concentrations that require TCLP analysis	None above LAMI, SARA
AAA 1951	13764-B 13764-M 13764-P 13765-V SV, PCB	Soil	Radon, R, M, P, SV, V, PCB	0/593	01 / NE corner of E diameter, 18 in below concrete floor	0/1093-B 0/1093-M 0/1793-P 0/1793-SV 9/793-V	16.90	17.00	0.60	Asm-241 - 0.04 pCi/g Po-210 - 2.47 pCi/g Po-210 - 0.01 pCi/g U-238 - 3.11 pCi/g U-235 - 0.30 pCi/g U-234 - 3.01 pCi/g	Ag - 1.0 to 1.0 ppm Al - 4000 to 11500 ppm As - 1.2 to 0.0 ppm Ba - 124 to 020.9 ppm Be - 1.0 to 0.0 ppm Bi - 1911 to 00700 ppm Br - 1.2 to 1.7 ppm Ca - 0.4 to 23.4 ppm Cd - 0.0 ppm Co - 0.0 ppm Cr - 0.4 to 23.4 ppm Cu - 0.0 ppm Fe - 0.0 to 0.1 ppm K - 10700 to 00000 ppm Mg - 1371 to 16700 ppm Mn - 105.7 to 1533 ppm Mo - 1700 to 33500 ppm Ni - 0.0 to 0.0 ppm Pb - 10.0 to 36.0 ppm Sb - 0.27 to 1.70 ppm Se - 0.0 to 0.0 ppm Si - 0.0 to 0.0 ppm V - 11.5 to 113.1 ppm Zn - 19.9 to 140.7 ppm Hg - 0.0 to 0.0 ppm	Asm-241 - 23.0 pCi/g Po-210 - 24.0 pCi/g Po-210 - 27.0 pCi/g U-238 - 39.0 pCi/g U-235 - 10.0 pCi/g U-234 - 86.0 pCi/g	Ag - 1.0 to 1.0 ppm Al - 4000 to 11500 ppm As - 1.2 to 0.0 ppm Ba - 124 to 020.9 ppm Be - 1.0 to 0.0 ppm Bi - 1911 to 00700 ppm Br - 1.2 to 1.7 ppm Ca - 0.4 to 23.4 ppm Cd - 0.0 ppm Co - 0.0 ppm Cr - 0.4 to 23.4 ppm Cu - 0.0 ppm Fe - 0.0 to 0.1 ppm K - 10700 to 00000 ppm Mg - 1371 to 16700 ppm Mn - 105.7 to 1533 ppm Mo - 1700 to 33500 ppm Ni - 0.0 to 0.0 ppm Pb - 10.0 to 36.0 ppm Sb - 0.27 to 1.70 ppm Se - 0.0 to 0.0 ppm Si - 0.0 to 0.0 ppm V - 11.5 to 113.1 ppm Zn - 19.9 to 140.7 ppm Hg - 0.0 to 0.0 ppm	None above MTHZ or LAMI, SARA, or total concentrations that require TCLP analysis	None above LAMI, SARA	
AAA 0065	13764-B	Soil	Radon, M (R, P, Sv only)	0/593	01 / Corner of tank, 18 in below concrete floor	0/1093-M	16.90	20.00	0.60	Pb - 0.0 ppm Hg - 0.0 ppm	Pb - 10.0 to 36.0 ppm Hg - 0.0 to 0.0 ppm	No total metals concentrations require TCLP analysis	None above LAMI, SARA			

CHI 0071, SWMI 0-0000
SAMPLE INVENTORY

10/19/93

AAA 0007	13736M	Soil	Radon, M (Hg & Pb only)	0593	01/E shallow, 8 1/2, 10 in before concrete floor	Date Validated	Radon Results (pCi/g) Gross Analysis	Isotopes	Metals	SVOC's and VOC's Results	Polynarics Results	PCB Results
				5.00	0.70	07/09/93 M	0.70					
AAA 0008	13736-M	Soil	Radon, M (Hg & Pb only)	0593	01/E shallow, 8 1/2, 10 in before concrete floor	07/09/93 M	1.00					

Clay Pipe Drilling Samples

Sample ID	EPA-9 Request Number	Sample Matrix	Analyzer Requested	Date (collected)	Sample Location	Date Validated	Radon Results (pCi/g) Gross Analysis	Isotopes	Metals	SVOC's and VOC's Results	Polynarics Results	PCB Results			
17' before upblast		Soil	Radon	6/18/93	Soil sample from 12 in before upblast, before base concrections		0.70								
7' before upblast		Soil	Radon	6/21/93	Soil sample from 24 in before upblast, before base concrections		1.00								
4' before upblast		Soil	Radon	6/21/93	Soil sample from 48 inches upblast, before base concrections		1.00								
AAA 1001	10936 V, SV, PCB 10004 B 10953 M	Soil	Radon, B, M, P, SV, V, PCB	6/21/93	Under clay pipe, before base concrections	07/09/93 B 07/09/93 PCBs	112.00	<p>Gamma Scan</p> <p>Am-241 - 7.31 pCi/g Cs-137 - 0.5 pCi/g Eu-152 - 0.0 pCi/g K-40 - 13,000 pCi/g Ra-226 - 1.02 pCi/g Th-232 - 3.91 pCi/g U-235 - 0.13 pCi/g U-238 - 3.03 pCi/g</p> <p>KEMAS</p> <p>Total H- - 1.9 mg/kg BAS</p> <p>Pb-210 - 1.047 pCi/g Pb-210 - 0.640 pCi/g Am-241 - 0.35 pCi/g EC</p> <p>Se-76 - 0.16 pCi/g</p>	<p>Lead-206 - 0.73 pCi/g Pb-210 - 0.90 pCi/g U-235 - 0.0 pCi/g U-238 - 0.13 pCi/g Th-232 - 0.0 pCi/g U-235 - 0.0 pCi/g U-238 - 0.13 pCi/g</p> <p>Total H- - 2.00 mg/kg BAS</p> <p>Pb-210 - 1.047 pCi/g Pb-210 - 0.640 pCi/g Am-241 - 0.35 pCi/g EC</p> <p>Se-76 - 0.16 pCi/g</p>	<p>Ag - 0.0 to 1.0 ppm Al - 4000 to 11000 ppm As - 1.2 to 10.0 ppm Ba - 100 to 2000 ppm Be - 1.0 to 4.0 ppm Bi - 100 to 10000 ppm Cd - 0.2 to 1.7 ppm Ch - Not reported Cr - 0.0 to 25.0 ppm Cu - 2.00 to 71.1 ppm Co - Not reported Fe - 1000 to 40000 ppm K - 10000 to 40000 ppm Mg - 100 to 10000 ppm Mn - 100 to 1000 ppm Mo - 2000 to 32000 ppm Ni - Not reported Pb - 10.0 to 30.0 ppm Sb - 0.27 to 1.39 ppm Se - Not reported Te - Not reported V - 11.3 to 113.1 ppm Zn - 10.0 to 100.3 ppm Hg - Not reported</p>	<p>Am-241 - 23.0 pCi/g Cs-137 - 4.0 pCi/g None None Ra-226 - 0.73 pCi/g Th-232 - 0.90 pCi/g U-235 - 0.0 pCi/g U-238 - 0.13 pCi/g Total H- - 2.00 mg/kg BAS</p> <p>Pb-210 - 1.047 pCi/g Pb-210 - 0.640 pCi/g Am-241 - 0.35 pCi/g EC</p> <p>Se-76 - 0.16 pCi/g</p>	<p>Ag - 400 ppm Al - None As - 0.00 ppm Ba - 5000 ppm Be - 0.10 ppm Bi - 0.10 ppm Cd - 0.00 ppm Ch - 1000 ppm Cr - None Cu - None Co (PPM) - 0.00 ppm Co - 3000 ppm Fe - None K - None Mg - None Mn - 1000 ppm Mo - 1000 ppm Ni - None Pb - 1000 ppm Sb - 0.27 ppm Se - 0.00 ppm Te - 0.0 ppm V - 100 ppm Zn - 2000 ppm Hg - 2.1 ppm</p>	<p>No total metals concentrations exceeds TCLP thresholds (Verbal report)</p>	<p>No total metals concentrations exceeds TCLP thresholds (Verbal report)</p>	<p>1.0 ppm (MCL - ANN 8 for PCBs per page)</p>

OU 1071, SWMU 0-3000
SAMPLE INVENTORY

10/1993

AAA 1912	14916 V, SV, PCB 1000-LE 10951 M	Soil	Radon, R, M, P, SV, V, PCB	6/1/93	14 sides of clay paper, vials from construction	07/1993, SV 07/1993, V PCBs	-5.00	-9.20	1.70	Chemicals: Am-241 - 7.00 pCi/g Cs-137 - 0.97 pCi/g Chrom - 0.0 pCi/g K-40 - 37.00 pCi/g Rn-226 - 2.01 pCi/g Th-232 - 2.9 pCi/g U-238 - 41.5 pCi/g U-235 - 3.20 pCi/g ELTOS: Total U - 2.4 mg/g BAS: Po-210 - 0.07 pCi/g Po-210 - 20.16 pCi/g Am-241 - 0.31 pCi/g EC: Sr-90 - 0.0 pCi/g	Am-241 - 32.0 pCi/g Cs-137 - 4.0 pCi/g None Rn-226 - 0.97 pCi/g Th-232 - 0.00 pCi/g U-238 - 48.0 pCi/g U-235 - 10.0 pCi/g Total U - 2.00 mg/g Po-210 - 27.0 pCi/g Po-210 - 10.0 pCi/g Am-241 - 21.0 pCi/g Sr-90 - 0.0 pCi/g	Ag - 0.0 to 1.0 ppm Al - 4000 to 11000 ppm As - 1.2 to 10.0 ppm Ba - 100 to 1000 ppm Be - 0.0 to 0.4 ppm Bi - 0.0 to 100 ppm Bk - 0.0 to 100 ppm Br - 0.0 to 100 ppm Ca - 100 to 1000 ppm Cd - 0.0 to 0.1 ppm Ce - 0.0 to 100 ppm Co - 0.0 to 100 ppm Cr (VI) - 0.0 to 100 ppm Cr - 100 to 1000 ppm Fe - 1000 to 10000 ppm F - 1000 to 10000 ppm Gd - 0.0 to 100 ppm Hg - 100 to 1000 ppm In - 0.0 to 100 ppm I - 0.0 to 100 ppm K - 100 to 1000 ppm La - 0.0 to 100 ppm Li - 0.0 to 100 ppm Mn - 100 to 1000 ppm Mo - 0.0 to 100 ppm Na - 100 to 1000 ppm Ni - 0.0 to 100 ppm Np - 0.0 to 100 ppm O - 0.0 to 100 ppm P - 0.0 to 100 ppm Pb - 0.0 to 100 ppm Pu - 0.0 to 100 ppm Rb - 0.0 to 100 ppm S - 0.0 to 100 ppm Sb - 0.0 to 100 ppm Se - 0.0 to 100 ppm Si - 0.0 to 100 ppm Sm - 0.0 to 100 ppm Tl - 0.0 to 100 ppm V - 0.0 to 100 ppm Zn - 0.0 to 100 ppm None reported	No lead levels concentration but negative TCEP analysis. (Verbal report)	None above MTELA or LAW. SARA, no lead concentrations but negative TCEP analysis	410 ppm (MTELA - 1.0 L. OAL - PCBs 0.0 ppb)			
0 sides of sample tank		Soil	Radon, SV, V	7/1/93	Clay paper, S of sample tank, and from various paper	7/1/93, SV 7/1/93, V	16.00	11.20	0.20									
M end of clay paper		Strip	Radon	7/1/93	Strip of clay paper, S of tank, M end		0.00	1.00	1.70									
M end of paper		Strip	Radon	7/1/93	Strip of clay paper, S of tank, S end		0.00	2.10	3.40									

OU 1071, SWND 6-0360
SAMPLE INVENTORY

10/15/93

AAA 1989	11786-V P. PCB 11740 - B	Radon, R. M. P. SV, V. PCB	7/28/93	Smooth dry paper method method	072893-M 072893-BV 072893-V 071993- PCB	-11.20	-14.00	3.70	14.3 - 13.5 x 10 ⁶ pCi/g As - 240 - 21.0 pCi/g Pb - 230 - 24.0 pCi/g Po - 230 - 27.0 pCi/g U - 230 - 29.0 pCi/g U - 234 - 66.0 pCi/g U - 235 - 10.0 pCi/g	Ag - 1.0 ppm Al - 4200 ppm Ar - 1.2 ppm Ba - 31 ppm Be - 0.20 ppm Bi - 400 ppm Ca - 0.6 ppm Cd - 0.1 ppm Co - 317 ppb Cr - 1.1 ppm Cu - 40 ppm Fe - 4000 ppm K - 700 ppm Mg - 140 ppm Mn - 240 ppm Mo - 0.1 ppm Ni - 14 ppm Pb - 15 ppm Sb - 0.0 ppm Se - 0.2 ppm Tl - 0.0 ppm V - 1.5 ppm Zn - 24 ppm	Ag - 1.6 to 1.6 ppm Al - 4000 to 11500 ppm Ar - 1.2 to 1.0 ppm Ba - 134.0 to 225.0 ppm Be - 1.0 to 4.4 ppm Bi - 191.1 to 10200 ppm Ca - 1.2 to 1.7 ppm Cd - Not reported Co - 2.09 to 71.1 ppm Cr - Not reported Cu - 10000 to 42000 ppm Fe - 10000 to 42000 ppm K - 10000 to 42000 ppm Mg - 1331 to 10700 ppm Mn - 185.7 to 1573 ppm Mo - 2.700 to 33100 ppm Ni - Not reported Pb - 18.0 to 36.0 ppm Sb - 0.17 to 1.70 ppm Se - Not reported Tl - Not reported V - 11.0 to 113.1 ppm Zn - 19.9 to 148.7 ppm	Ag - 400 ppm Al - Not Ar - 0.40 ppm Ba - 3400 ppm Be - 0.14 ppm Bi - Not Ca - Not Cd - 0.0 ppm Co - 1400 ppm Cr - Not Cu - 1900 - 400 ppm Fe - Not K - Not Mg - Not Mn - Not Mo - Not Ni - 1400 ppm Pb - 340 ppm Sb - 31 ppm Se - 400 ppm Tl - 0.4 ppm V - 500 ppm Zn - 2400 ppm	None above MCLs or LAMP. SALS on total concentrations but requires TCLP analysis	None above MCLs or LAMP. SALS on total concentrations but requires TCLP analysis
AAA 0371	11386-M	Radon, M	7/28/93	End of pipe method, 1 B BCE	072893-M	-11.20	-31.20	0.20	Ag - 1.6 to 1.6 ppm Al - 4000 to 11500 ppm Ar - 1.2 to 1.0 ppm Ba - 134.0 to 225.0 ppm Be - 1.0 to 4.4 ppm Bi - 191.1 to 10200 ppm Ca - 1.2 to 1.7 ppm Cd - Not reported Co - 2.09 to 71.1 ppm Cr - Not reported Cu - 10000 to 42000 ppm Fe - 10000 to 42000 ppm K - 10000 to 42000 ppm Mg - 1331 to 10700 ppm Mn - 185.7 to 1573 ppm Mo - 2.700 to 33100 ppm Ni - Not reported Pb - 18.0 to 36.0 ppm Sb - 0.17 to 1.70 ppm Se - Not reported Tl - Not reported V - 11.0 to 113.1 ppm Zn - 19.9 to 148.7 ppm	Ag - 400 ppm Al - Not Ar - 0.40 ppm Ba - 3400 ppm Be - 0.14 ppm Bi - Not Ca - Not Cd - 0.0 ppm Co - 1400 ppm Cr - Not Cu - 1900 - 400 ppm Fe - Not K - Not Mg - Not Mn - Not Mo - Not Ni - 1400 ppm Pb - 340 ppm Sb - 31 ppm Se - 400 ppm Tl - 0.4 ppm V - 500 ppm Zn - 2400 ppm	None above MCLs or LAMP. SALS on total concentrations but requires TCLP analysis	None above MCLs or LAMP. SALS on total concentrations but requires TCLP analysis		

Modified Table 19
LDR Reference Information

Manifest Number	Date	Existing LDR		
		RES Reference	Manifest Number	Comments
00130116 11a	7/30/92	HO 55548-18	Blank	
00130116 11b	7/30/92	HO 55548-18	Blank	Waste Codes - D001, D008
00130116 11c	7/30/92	HO 55548-18	Blank	Waste Code - None
00130117	7/30/92	HO 58742	00130017, 00130018, 00130019	
00130118	7/30/92	HO 58742	00130017, 00130018, 00130019	
00130119 11a,11b,11c	7/30/92	HO 58742	00130017, 00130018, 00130019	
00130119 11d	7/30/92	HO 58743-80	Blank	
00130121 11a	7/30/92	HO 59361-49	00130021	
00130121 11b	7/30/92	HO 59080-40	-7001	Original number crossed out.
00130121 11c,11d	7/30/92	HO 59082-39	00130021 -	
00103304	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130049	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130050	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130051	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130052	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130053	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130054	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130056	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130057	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130058	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130059	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130060	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130061	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130062	5/5/92	HO 51626-60	Blank	Appendix IV/V
00130063	5/5/92	HO 51626-60	Blank	Appendix IV/V
LA A 6026570	8/4/92	BR 33400	LA A 6026565, 67, 69	
LA A 6026571	8/4/92	BR 33400	LA A 6026565, 67, 69	
00103374	9/24/92	HO 58742-60	00103370-73	

LAND DISPOSAL RESTRICTION NOTIFICATION (per 40 CFR 268.7)

INSTRUCTION: Complete Part I. Check and complete Part II or Part III. Complete and sign Part IV.

PART I: Generator, Reference and Manifest Information

1. Generator Name: Los Alamos National Laboratory EPA I.D. #: NM289001K
2. Address: P.O. Box 1663 MS 2593
3. City: Los Alamos State: NM Zip: 87544
4. RES Reference # (BR/ HO /L/W/MO/OP): 55548-18 Manifest #: _____
5. EPA Waste Codes (list ALL applicable codes and subcategories for this stream--see reverse side for subcategories):
D001 ignitable compressed gas, D003 other

6. This stream is a _____ wastewater (<1% total organic carbon and <1% total suspended solids for most wastes) or _____ nonwastewater. If wastewater, obtain Wastewater Attachments 1, 2, and 3 from your Sales or Customer Service Representative

PART II: Wastes Subject to Land Disposal Restrictions (If the waste is non-hazardous or a "newly listed waste" identified III below, complete Part III rather than Part II.)

Pursuant to 40 CFR 268.7, I am notifying _____ RES(LA); _____ RES(NJ); RES(TX); _____ RES of LA; _____ OPC; _____ TET that under the RES Reference and manifest numbers, I am shipping to you a waste identified by the EPA waste code(s) and subcategory(ies) listed in Part I which is subject to the EPA Land Disposal Restrictions, as checked below.

A. Check line 1, 2, 3, 4 and/or 5, as applicable

- _____ 1. Treatment standard, as checked by me in Attachment 1, which I am enclosing, for _____ F001; _____ F002; _____ F004; _____ F006; _____ F039.
2. Numerical treatment standard(s) specified in 40 CFR 268.41(a) (Table CCWE), per Attachment 3.
3. Treatment standard(s) expressed as specified technology(ies) in 40 CFR 268.43(a), for which the required technology, Attachment 3, is _____ INCIN; DEACT; _____ ADGAS fb NEUTR; _____ DMERC; _____ STABL; or, for _____ Incineration in a TOSCA-permitted incinerator (RES(TX) only).
- _____ 4. Numerical treatment standard(s) specified in 40 CFR 268.43(a) (Table CCW), per Attachment 3.
- _____ 5. This waste is (check one) _____ an "Appendix IV lab pack" or an _____ "Appendix V lab pack". I have signed required certification on page 2 of Attachment 2, which I am enclosing.

B. Also check one or more of the following lines if applicable

6. A D001-D011 waste which (a) _____ does (b) does not meet the definition of a "California List" waste (see definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
- _____ 7. Treatment standard(s) with a "capacity variance" until May 8, 1993, per Attachment 3, as I have checked on the Attachment 3. The waste (a) _____ does (b) _____ does not meet the definition of a "California List" waste (see definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
- _____ 8. A nickel or thallium "California List" waste (see definition below). I have checked the "California List" section of Attachment 1, which I am enclosing.
- _____ 9. A specific extension or variance (other than a "capacity variance"), as I have checked on Line C or D of Attachment 2, which I am enclosing.
- _____ 10. The waste already meets relevant treatment standards. I have signed the required certification on page 2 of Attachment 2, which I am enclosing.

PART III: Wastes NOT Subject to Land Disposal Restrictions

Pursuant to 40 CFR 268.7, I am notifying _____ RES(LA); _____ RES(NJ); _____ RES(TX); _____ RES of LA; _____ OPC; _____ TET that, under the reference and manifest numbers, I am shipping to you a waste which is non-hazardous and/or identified by the EPA waste code in Part I above. The waste is not subject to the Land Disposal Restrictions because the waste is non-hazardous and/or consists of one or more of the following EPA waste codes listed since November 8, 1984: D018-43, F032, F034-35, F037-38, K084-86, K088, K090-91, K117-18, K123-26, K131-32, K136, U328, U353, U359 or other codes listed since 5/18/91.

PART IV: Authorized Representative

Signature: Andrew J. Mantoya Date: 7-30-92
 Print or Type Name: Andrew J. Mantoya
 Title: Staff Member

NOTE: A "California List" waste is (a) a hazardous waste containing Halogenated Organic Compounds at a concentration of 1000 mg/l, or greater; or (b) a liquid hazardous waste (including free liquids) having a pH equal to or less than 2.0 or containing any of the following materials at a concentration equal to or greater than specified: PCB's, 50 ppm; or (in mg/l) free cyanides, 1000; As, 500; Cd, 10; Pb, 500; Hg, 20; Ni, 134; Se, 100; Tl, 130.

ROLLINS

ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTION NOTIFICATION (per 40 CFR 268.7)

INSTRUCTION: Complete Part I. Check and complete Part II or Part III. Complete and sign Part IV.

PART I: Generator, Reference and Manifest Information

1. Generator Name: Los Alamos National Laboratory EPA I.D. #: NM 08900109
2. Address: P.O. Box 1663 MS 2593
3. City: Los Alamos State: NM Zip: 87646
4. RES Reference # (BR/HO/L/W/MO/OP): 55546-18 Manifest #: _____
5. EPA Waste Codes (list ALL applicable codes and subcategories for this stream--see reverse side for subcategories):
0001 ignitable compressed gas

6. This stream is a _____ wastewater (<1% total organic carbon and <1% total suspended solids for most wastes) or nonwastewater. If wastewater, obtain Wastewater Attachments 1, 2, and 3 from your Sales or Customer Service Representative.

PART II: Wastes Subject to Land Disposal Restrictions (If the waste is non-hazardous or a "newly listed waste" identified in III below, complete Part III rather than Part II.)

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that under the above RES Reference and manifest numbers, I am shipping to you a waste identified by the EPA waste code(s) and subcategory(ies) listed in Part I above which is subject to the EPA Land Disposal Restrictions, as checked below.

A. Check line 1, 2, 3, 4 and/or 5, as applicable

1. Treatment standard, as checked by me in Attachment 1, which I am enclosing, for _____ F001; _____ F002; _____ F004; _____ F008; _____ F039.
2. Numerical treatment standard(s) specified in 40 CFR 268.41(a) (Table CCWE), per Attachment 3.
3. Treatment standard(s) expressed as specified technology(ies) in 40 CFR 268.42(a), for which the required technology, Attachment 3, is _____ INCIN; DEACT; _____ ADGAS fb NEUTR; _____ IMERC; _____ STABL; or, for P _____ Incineration in a TOSCA-permitted incinerator (RES(TX) only).
4. Numerical treatment standard(s) specified in 40 CFR 268.43(a) (Table CCW), per Attachment 3.
5. This waste is (check one) _____ an "Appendix IV lab pack" or an _____ "Appendix V lab pack". I have signed required certification on page 2 of Attachment 2, which I am enclosing.

B. Also check one or more of the following lines if applicable

6. A D001-D011 waste which (a) _____ does (b) does not meet the definition of a "California List" waste definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
7. Treatment standard(s) with a "capacity variance" until May 8, 1993, per Attachment 3, as I have checked on the encl Attachment 2. The waste (a) _____ does (b) _____ does not meet the definition of a "California List" waste definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
8. A nickel or thallium "California List" waste (see definition below). I have checked the "California List" section Attachment 1, which I am enclosing.
9. A specific extension or variance (other than a "capacity variance"), as I have checked on Line C or D of Attachment 2, which I am enclosing.
10. The waste already meets relevant treatment standards. I have signed the required certification on page 2 of Attachment 2, which I am enclosing.

PART III: Wastes NOT Subject to Land Disposal Restrictions

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that, under the above reference and manifest numbers, I am shipping to you a waste which is non-hazardous and/or identified by the EPA waste code(s) in Part I above. The waste is not subject to the Land Disposal Restrictions because the waste is non-hazardous and/or consists only of or more of the following EPA waste codes listed since November 8, 1984: D018-43, F032, F034-35, F037-38, K064-66, K088, K090-91, K107, K117-18, K123-26, K131-32, K136, U328, U363, U369 or other codes listed since 5/18/91.

PART IV: Authorized Representative

Signature: Andrew J. Montoya Date: 7-30-92
Print or Type Name: Andrew J. Montoya
Title: Staff Member

NOTE: A "California List" waste is (a) a hazardous waste containing Halogenated Organic Compounds at a concentration of 1000 mg/l, or greater; or (b) a liquid hazardous waste (including free liquids) having a pH equal to or less than 2.0 or containing any of the following materials at a concentration equal to or greater than specified: PCB's, 50 ppm; or (in mg/l) free cyanides, 1000; As, 500; Cd, 100; Cr, 100; Hg, 20; Ni, 134; Se, 100; Tl, 130.

CHI 1071, SWMI 0 1012
SAMPLE INVENTORY

10/19/93

Sample ID	Request Number	Sample Matrix	Analysis Requested	Date Collected	Sample Location	Date Validated	Radon Results (pCi/l)	Greater Analytes	Isotopes	Metals	VOCs and VOCs Results	Pesticides Results	Remarks
AAA 0106	11303 M	Soil	Radon, M (Hg & Pb only)	7/7093	0.8 M of center of tank, 10 in. RIB	0/1093 M	0.00	20.00	0.00	Pb - 15 ppm Hg - 0.1 ppm	Pb - 100 ppm Hg - 24 ppm	Hg - 0.2 ng/L No other total metals examined TCIP analysis	
AAA 0107	11303 M	Soil	Radon, M (Hg & Pb only)	7/7093	1.0 below AAA 0106, 30 R beam method, verification sample	0/1093 M	0.00	21.30	1.00	Pb - 10 ppm Hg - 0.1 ppm	Pb - 900 ppm Hg - 24 ppm	Hg - 0.2 ng/L No other total metals examined TCIP analysis	
AAA 0108	11303 M	Soil	Radon, M (Hg & Pb only)	7/7093	0.5 R beam method, 1.0 below edge of tank, 1.0 below clay pipes, verification sample	0/1093 M	11.20	19.90	0.00	Pb - 16 ppm Hg - 0.1 ppm	Pb - 900 ppm Hg - 24 ppm	Hg - 0.2 ng/L No other total metals examined TCIP analysis	
AAA 0109	11303 M	Soil	Radon, M (Hg & Pb only)	7/7093	0.8 R beam method, 0.8 NW of NW corner of tank, 1.0 below pipe, verification sample	0/1093 M	10.90	21.20	1.00	Pb - 17 ppm Hg - 0.1 ppm	Pb - 900 ppm Hg - 24 ppm	Hg - 0.2 ng/L No other total metals examined TCIP analysis	
AAA 0110	11303 M	Soil	Radon, M (Hg & Pb only)	7/7093	2.0 R beam method, 1.0 below pipe, verification sample	0/1093 M	1.00	21.00	2.70	Pb - 16 ppm Hg - 0.6 ppm	Pb - 900 ppm Hg - 24 ppm	Hg - 0.2 ng/L No other total metals examined TCIP analysis	
AAA 0111	11303 M	Soil	Radon, M (Hg & Pb only)	7/7093	2.5 R beam method, 1.0 below pipe, verification sample	0/1093 M	11.20	3.00	-4.70	Pb - 29 ppm Hg - 0.0 ppm	Pb - 900 ppm Hg - 24 ppm	Hg - 0.2 ng/L No other total metals examined TCIP analysis	
AAA 0112	11303 M	Soil	Radon, M (Hg & Pb only)	7/7093	3.0 R beam method, 1.0 below pipe, verification sample	0/1093 M	11.20	10.00	2.70	Pb - 18 ppm Hg - 0.4 ppm	Pb - 900 ppm Hg - 24 ppm	Hg - 0.2 ng/L No other total metals examined TCIP analysis	
AAA 0113	11303 M	Soil	Radon, M (Hg & Pb only)	7/7093	3.5 R beam method, 1.0 below pipe, verification sample	0/1093 M	3.00	21.70	3.90	Pb - 26 ppm Hg - 0.6 ppm	Pb - 900 ppm Hg - 24 ppm	Hg - 0.2 ng/L No other total metals examined TCIP analysis	

High Volume Air Samples Filter

Sample ID	Request Number	Sample Matrix	Analysis Requested	Date Collected	Sample Location	Date Validated	Radon Results (pCi/l)	Greater Analytes	Isotopes	Metals	VOCs and VOCs Results	Pesticides Results	Remarks
Demo-001		Filter	Radon	6/31/93	Downwind to red air sample filter		0.00	0.00	0.70				
Upwind		Filter	Radon	6/31/93	Upwind to red air sample filter		0.00	2.00	0.00				

OU 1071, SWARTI 0-306D
SAMPLE INVENTORY

10/19/93

Sample ID	Sample Management Number	Sample Matrix	Analysis Requested	Date Collected	Sample Location	Date Data Validated	Radon Results (pCi/g)	Isotopes	Metals	SVOCs and VOCs Results	Pesticides Results	PCB Results
AAA 0170		Filter	Radon	7/13/93	East bi-rod sample filter		6.30	12.00	0.30			
AAA 0180		Filter	Radon	7/13/93	West bi-rod sample filter		11.50	24.30	1.00			
AAA 0190		Filter	Radon	7/13/93	East bi-rod sample filter		10.00	30.00	0.60			
AAA 0200		Filter	Radon	7/13/93	West bi-rod sample filter		17.00	30.00	0.60			
AAA 0210		Filter	Radon	7/13/93	East bi-rod sample filter		0.00	0.70	0.30			
AAA 0220		Filter	Radon	7/13/93	West bi-rod sample filter		7.20	15.50	0.50			
AAA 0230		Filter	Radon	7/13/93	East bi-rod sample filter		0.00	0.30	0.30			
AAA 0240		Filter	Radon	7/13/93	West bi-rod sample filter		1.00	0.30	0.60			
AAA 0250		Filter	Radon	7/13/93	East bi-rod sample filter		3.20	0.60	1.10			
AAA 0260		Filter	Radon	7/13/93	West bi-rod sample filter		0.00	1.10	0.70			
AAA 0270		Filter	Radon	7/13/93	East bi-rod sample filter		0.70	1.10	0.90			
AAA 0280		Filter	Radon	7/13/93	West bi-rod sample filter		1.00	1.70	1.40			
AAA 0290		Filter	Radon	7/13/93	East bi-rod sample filter		3.50	0.30	0.10			
AAA 0300		Filter	Radon	7/13/93	West bi-rod sample filter		1.00	0.10	0.30			
AAA 0310		Filter	Radon	7/13/93	East bi-rod sample filter		0.00	2.00	0.30			
AAA 0320		Filter	Radon	7/13/93	West bi-rod sample filter		3.50	1.00	0.30			
AAA 0330		Filter	Radon	7/13/93	East bi-rod sample filter		3.20	10.20	13.30			
AAA 0340		Filter	Radon	7/13/93	West bi-rod sample filter		32.00	41.10	13.70			
AAA 0350		Filter	Radon	7/13/93	East bi-rod sample filter		0.00	1.70	2.10			
AAA 0360		Filter	Radon	7/13/93	West bi-rod sample filter		0.00	1.30	1.30			
AAA 0370		Filter	Radon	7/13/93	East bi-rod sample filter		0.00	1.30	1.20			
AAA 0380		Filter	Radon	7/13/93	West bi-rod sample filter		0.70	0.00	1.10			
AAA 0390		Filter	Radon	7/13/93	East bi-rod sample filter		0.00	0.00	1.10			
AAA 0400		Filter	Radon	7/13/93	West bi-rod sample filter		14.30	00.10	17.70			
AAA 0410		Filter	Radon	0/1/93	East bi-rod sample filter		0.00	18.00	1.70			
AAA 0420		Filter	Radon	0/1/93	West bi-rod sample filter		0.00	7.90	1.10			
AAA 0430		Filter	Radon	0/1/93	East bi-rod sample filter		0.00	1.10	0.40			
AAA 0440		Filter	Radon	0/1/93	West bi-rod sample filter		19.30	05.30	13.30			
AAA 0450		Filter	Radon	0/1/93	East bi-rod sample filter		10.00	13.00	0.10			
AAA 0460		Filter	Radon	0/1/93	West bi-rod sample filter		3.30	3.40	3.40			
AAA 0470		Filter	Radon	0/1/93	East bi-rod sample filter		1.00	0.00	2.30			
AAA 0480		Filter	Radon	0/1/93	West bi-rod sample filter		1.10	0.70	7.20			
AAA 0490		Filter	Radon	0/1/93	East bi-rod sample filter		7.20	12.11	4.40			

Environmental Services Summary

Sample ID	Sample Management Number	Sample Matrix	Analysis Requested	Date Collected	Sample Location	Date Data Validated	Radon Results (pCi/g)	Isotopes	Metals	SVOCs and VOCs Results	Pesticides Results	PCB Results
Sample Filter		Sample	Radon	0/1/93	South shore of building #30390		0.00	0.00	0.00			
Side of building		Sample	Radon	0/1/93	Side of building #30390		0.00	0.00	0.00			
South of building		Sample	Radon	0/1/93	South of building #30390		0.00	0.00	0.00			
East rear sub-basement		Sample	Radon	0/1/93	East rear sub-basement of building #30390		0.00	0.00	0.00			
Front end inside back of building		Sample	Radon	0/1/93	Front end inside back of building #30390		0.00	0.00	0.00			

OH 1071, SWNH 0-0910
 SAMPLE INVENTORY

10/19/93

Chain ID	Sample Matrix	Sample Requested	Date Collected	Sample Location	Date Data Validated	Radon Results (pCi/g)	Isotopes	Metals	SVOC's and VOC's Results	Pesticides Results	PCBs Results
1071-001	Water	Chem and (Pb, Fe)	6/21/93	Down water, head and basement tank		MDA	MDA	MDA			
1071-002	Water	Radon, M (Pb and Fe only)	6/21/93	Basement, west chamber (Reanalyzed 8/14/93 using P1021 preservatives)	8/14/93 M	0.00	4.00	4.00	0.00		
1071-003	Water	Radon, M (Pb and Fe only)	6/21/93	Basement, down storage area (Reanalyzed 8/14/93 using P1021 preservatives)	8/14/93 M	0.00	1.10	1.10	0.00		
1071-004	Water	Radon, M (Pb and Fe only)	6/21/93	Basement water	8/14/93 M	0.00	4.63	4.63	0.00		
1071-005	Water	Radon, M (Pb and Fe only)	6/21/93	Down water	8/14/93 M	0.00	3.90	3.90	0.00		

Water Samples

Sample ID	EM:9 Request Number	Sample Matrix	Analyse Requested	Date Collected	Sample Location	Date Data Validated	Radon Results (pCi/g)			Isotopes		Metals			SVOC's and VOC's Results	Pesticides Results	PCBs Results
							MDA	0.00	1.10	Sample Results	L.A.M. Screening Action Levels (Bq/L)	Background Metals Concentration Range for the Low Abundance Area	Method Results	L.A.M. Screening Action Levels (Pb/Mg)			
1071-001	1071-001	Water	Chem and (Pb, Fe)	6/21/93	Down water, head and basement tank		MDA	MDA	MDA								
1071-002	1071-002	Water	Radon, M (Pb and Fe only)	6/21/93	Basement, west chamber (Reanalyzed 8/14/93 using P1021 preservatives)	8/14/93 M	0.00	4.00	4.00	0.00							
1071-003	1071-003	Water	Radon, M (Pb and Fe only)	6/21/93	Basement, down storage area (Reanalyzed 8/14/93 using P1021 preservatives)	8/14/93 M	0.00	1.10	1.10	0.00							
1071-004	1071-004	Water	Radon, M (Pb and Fe only)	6/21/93	Basement water	8/14/93 M	0.00	4.63	4.63	0.00							
1071-005	1071-005	Water	Radon, M (Pb and Fe only)	6/21/93	Down water	8/14/93 M	0.00	3.90	3.90	0.00							

OH 1071, SWMI 0-300(C)
SAMPLE INVENTORY

10/19/93

Other

Sample ID	PM 9 Request Number	Sample Address	Analytes Requested	Date Collected	Sample Location	Date Data Validated	Radion Results (pCi/g)		Isotope Results		Metals Results			SVOC's and VOC's Results	Pesticides Results	PC	
							α	β	γ	Isotope Results	JAMS Screening Action Levels (SAL)	Metals Results	Background Metals Concentration Range for the Last 12 Months Area				JAMS Screening Action Levels (SAL)
AAA 011	11124 M	Point Chapel	M (P, only)	7/1/93	Point Chapel Run OM Catholic Church Chapel Point	6/10/93 M	17.811	11.218	11.44								

KEY

Analyses Performed

- R - Radon - Gross alpha, beta, and gamma screening by the mobile radiological analysis laboratory
- R - Radiochemical Isotope analysis
- M - Targeted Analyte List (TAL) metals analysis
- P - Pesticides analysis
- SV - Semivolatile analysis
- V - Volatiles analysis
- PCB - Polychlorinated biphenyls analysis

Sample Location

- N, S, E, W - cardinal directions
- NE, NW, SE, SW - intercardinal directions

Radion Results

Gross alpha, beta, and gamma analyses have uncertainty values of +/- 43 I, +/- 21 B, and +/- 0.1, respectively. Analyses which were greater than the positive uncertainty value (i.e. +63 I, +23 B, or +0.6 for alpha, beta, or gamma) were considered above background.

Isotope Results

SAL - Screening Action Level
Constituent concentrations in bold and italics are above the ER Program's SAL for that constituent
* Ra-226 and Th-232 method detection limits are above the ER Program's SALs for those constituents. Therefore, it is unknown if these constituents actually exceed the ER Program's SALs.

- FAA - flame atomic absorption
- ETAAS - electrothermal vaporization atomic absorption
- MDA - minimum detectable activity
- NDA - no detectable activity
- ICPMS - inductively coupled plasma mass spectrometry
- PC - proportional counting
- RAS - radiochemical alpha spectrometry

Metals Results

TAL - Target Analyte List
SAL - Screening Action Level
Constituent concentrations in bold and italics are above the ER Program's SAL for that constituent.
All arsenic and beryllium concentrations exceed the ER Program's SALs, however, sample concentrations fall within background concentrations for these constituents (SALs are below background concentrations for arsenic and beryllium).

PHI 0071, SWP001 0.0000
SAMPLE INVENTORY

10/19/93

TCLP - Toxicity Characteristic Leaching Procedure

TCLP Heavy Metal Limits:

- Arsenic - 5.0 ppm
- Barium - 100.0 ppm
- Cadmium - 1.0 ppm
- Chromium - 5.0 ppm
- Lead - 5.0 ppm
- Mercury - 0.2 ppm
- Nickel - 10.0 ppm
- Selenium - 1.0 ppm
- Silver - 5.0 ppm
- Thallium - 1.0 ppm

If a total metal concentration exceeded 20x the TCLP threshold value, then TCLP analyses were required to be run on that metal constituent

SVOCs and VOCs Results

- SVOC - Semivolatile Organic Compound
- VOC - Volatile Organic Compound
- MDL - Method Detection Limit
- SAL - Screening Action Level

Pesticides Results

- SAL - Screening Action Level

PCBs Results

- PCB - Polychlorinated Biphenyl
- MDL - Method Detection Limit
- SAL - Screening Action Level

Constituent concentrations in bold and italics are above the ER Program's SAL for that constituent
MDLs for PCBs analyses (1.0 ppm or 0.5 ppm) were above LAMB SALs for PCBs of 90 ppb. Therefore it is unknown if PCBs actually
exceed LAMB SALs

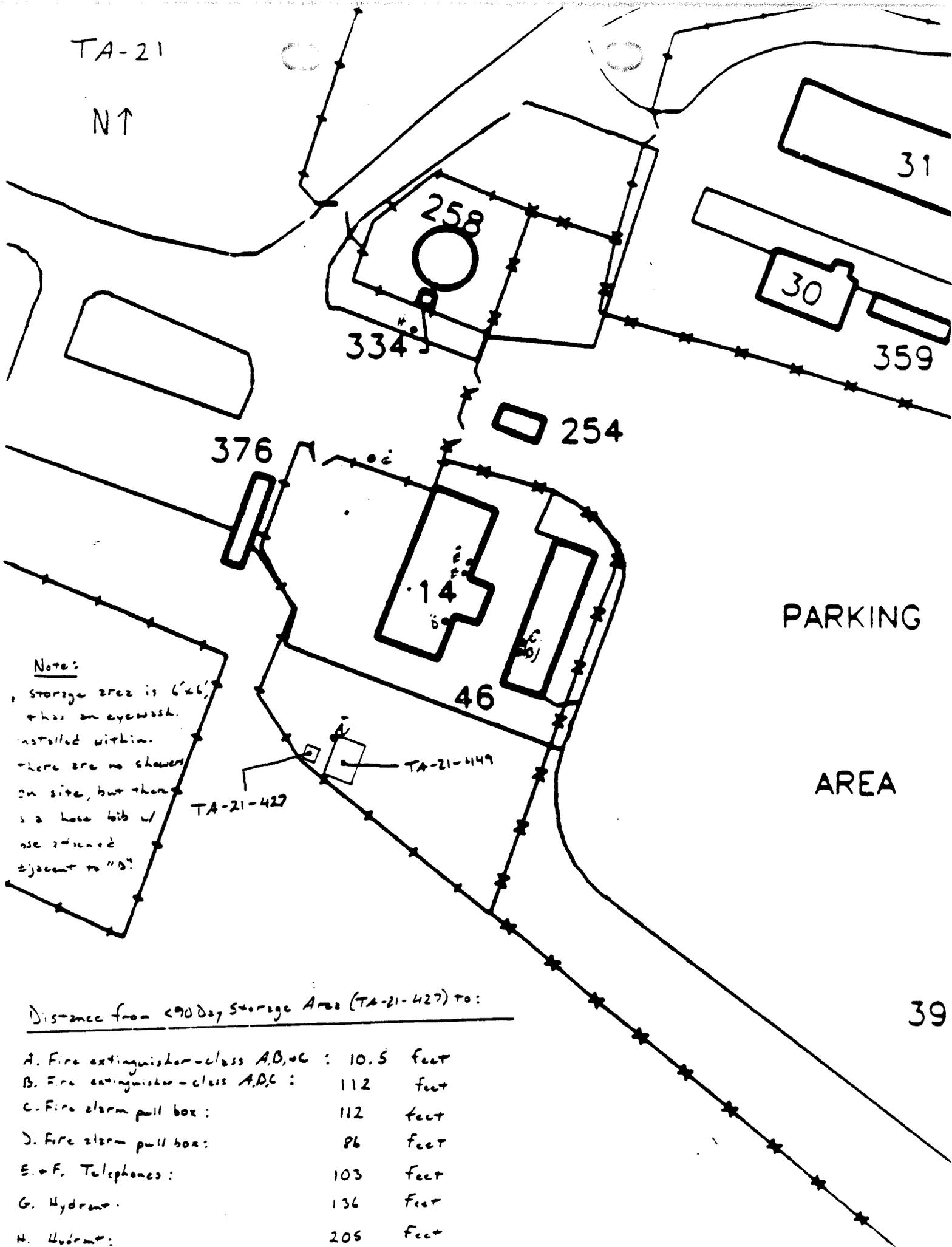
PHI

Shaded columns indicate validated data has not been received for this sample analysis

ENCLOSURE
9

TA-21

N↑



Notes:

Storage area is 6'x6'
 + has an eyewash
 installed within.
 There are no showers
 on site, but there
 is a hose bib w/
 use adjacent to "D"

TA-21-427
 TA-21-449

Distance from 90 Day Storage Area (TA-21-427) to:

A. Fire extinguisher - class A,B,C :	10.5	feet
B. Fire extinguisher - class A,B,C :	112	feet
C. Fire alarm pull box :	112	feet
D. Fire alarm pull box :	86	feet
E. + F. Telephones :	103	feet
G. Hydrant :	136	feet
H. Hydrant :	206	feet

39

ENCLOSURE
10

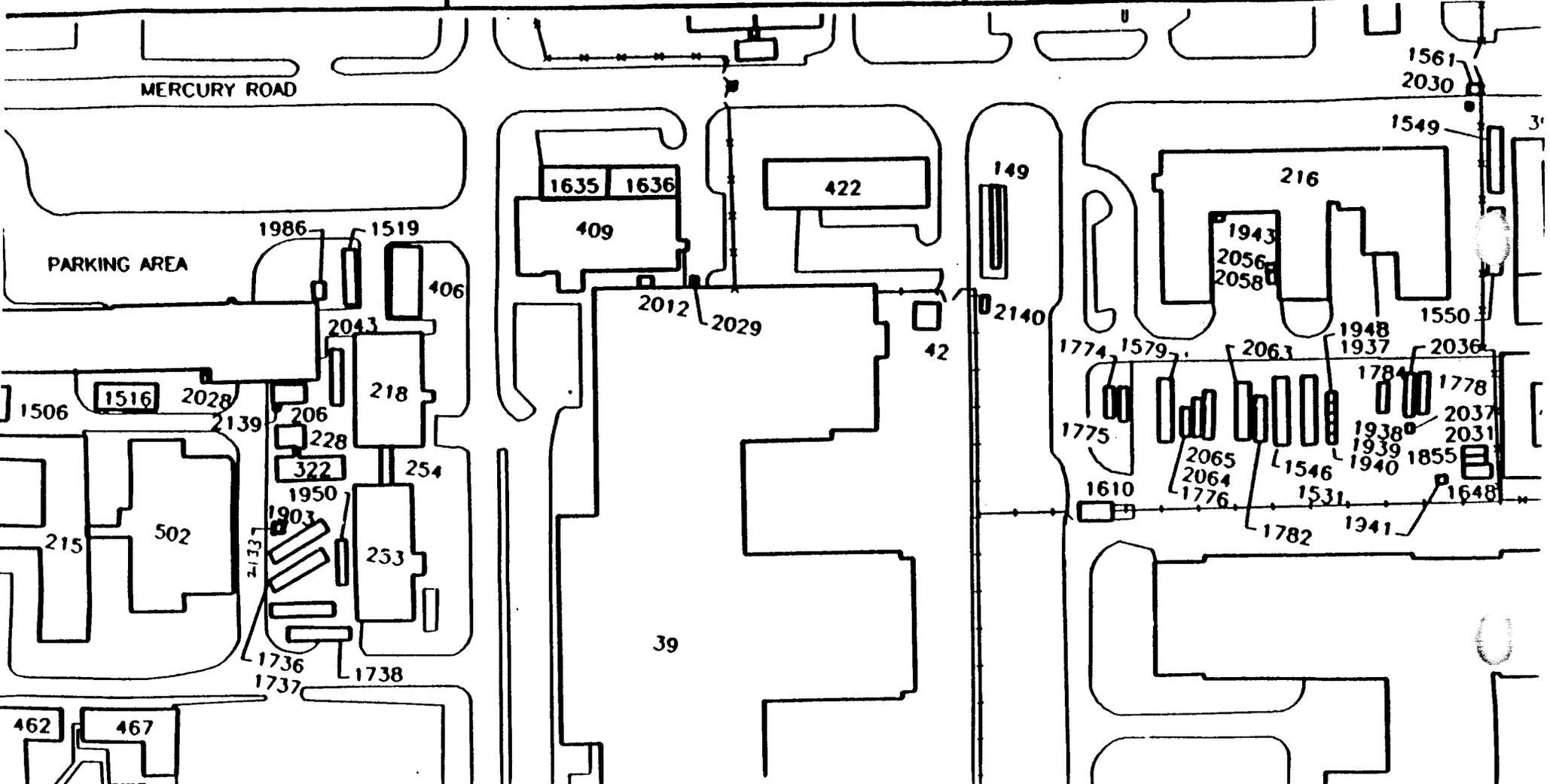
C

D

E

MERCURY ROAD

PARKING AREA



1986

1519

1635 1636

409

422

149

216

1943
2056
2058

1561
2030

1549

406

2043

2012

2029

2140

42

1550

1506

1516

2028

2139

206

228

218

322

254

1950

1903

253

1736

1737

1738

1774

1579

2063

1948

1937

2036

1784

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1775

2065

2064

1776

1546

1531

1610

1782

1341

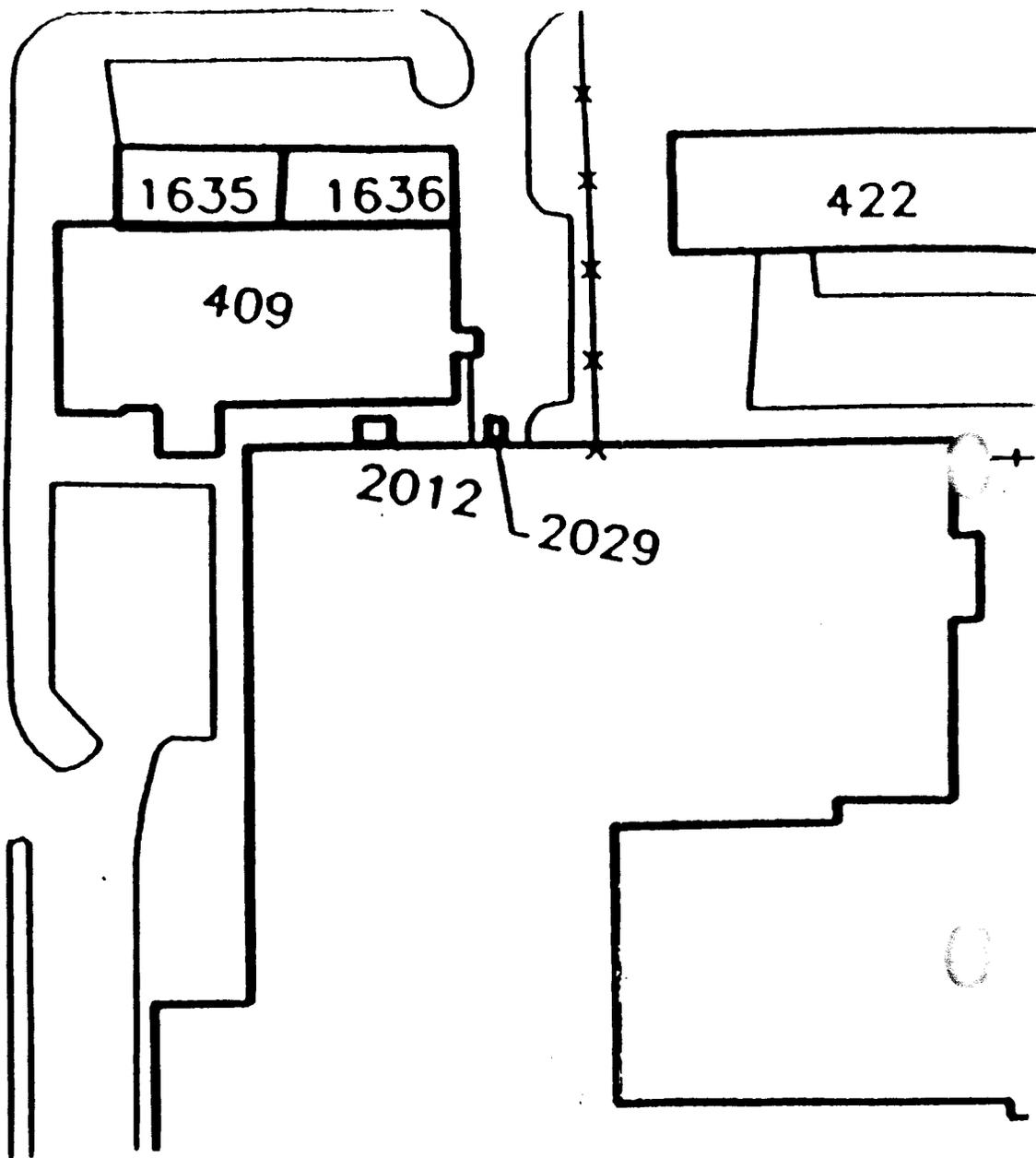
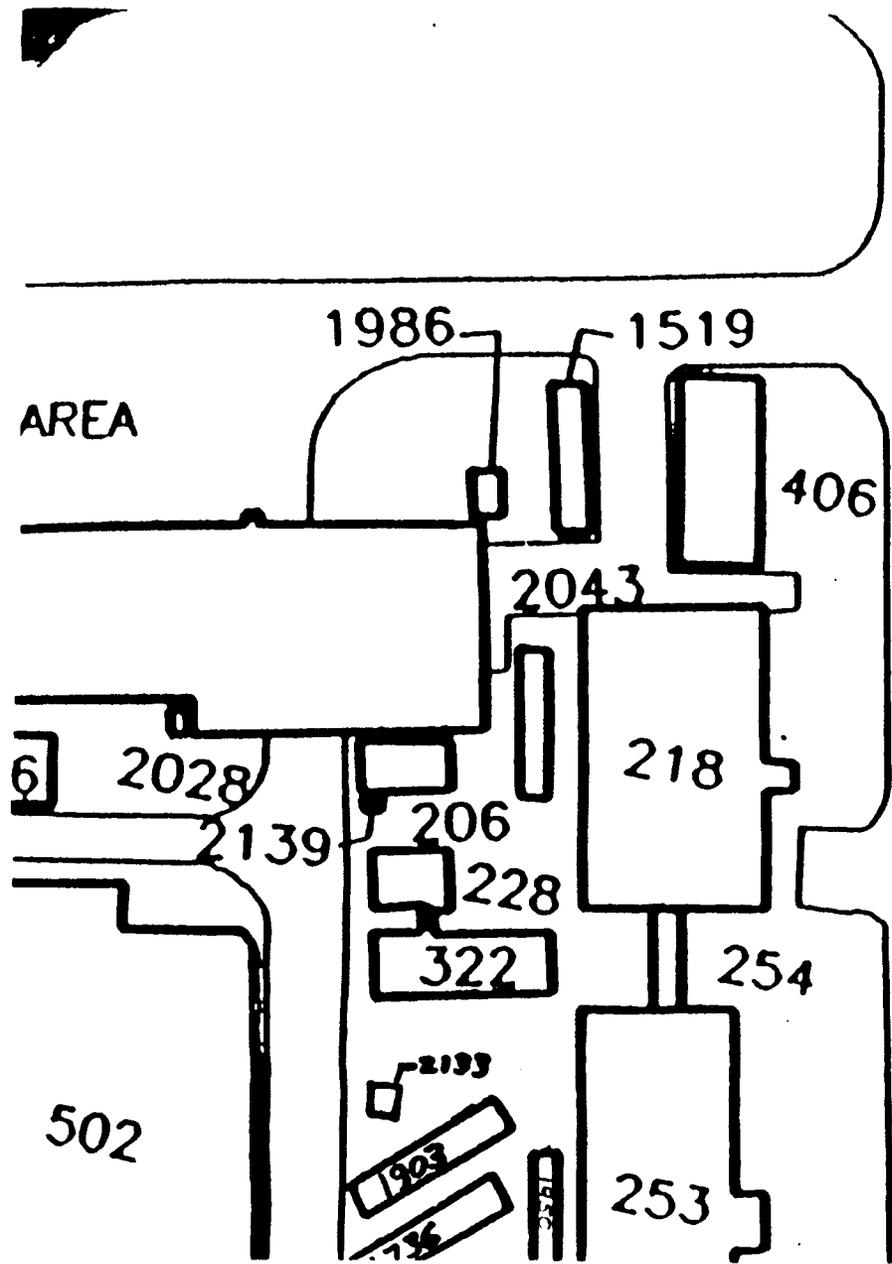
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39

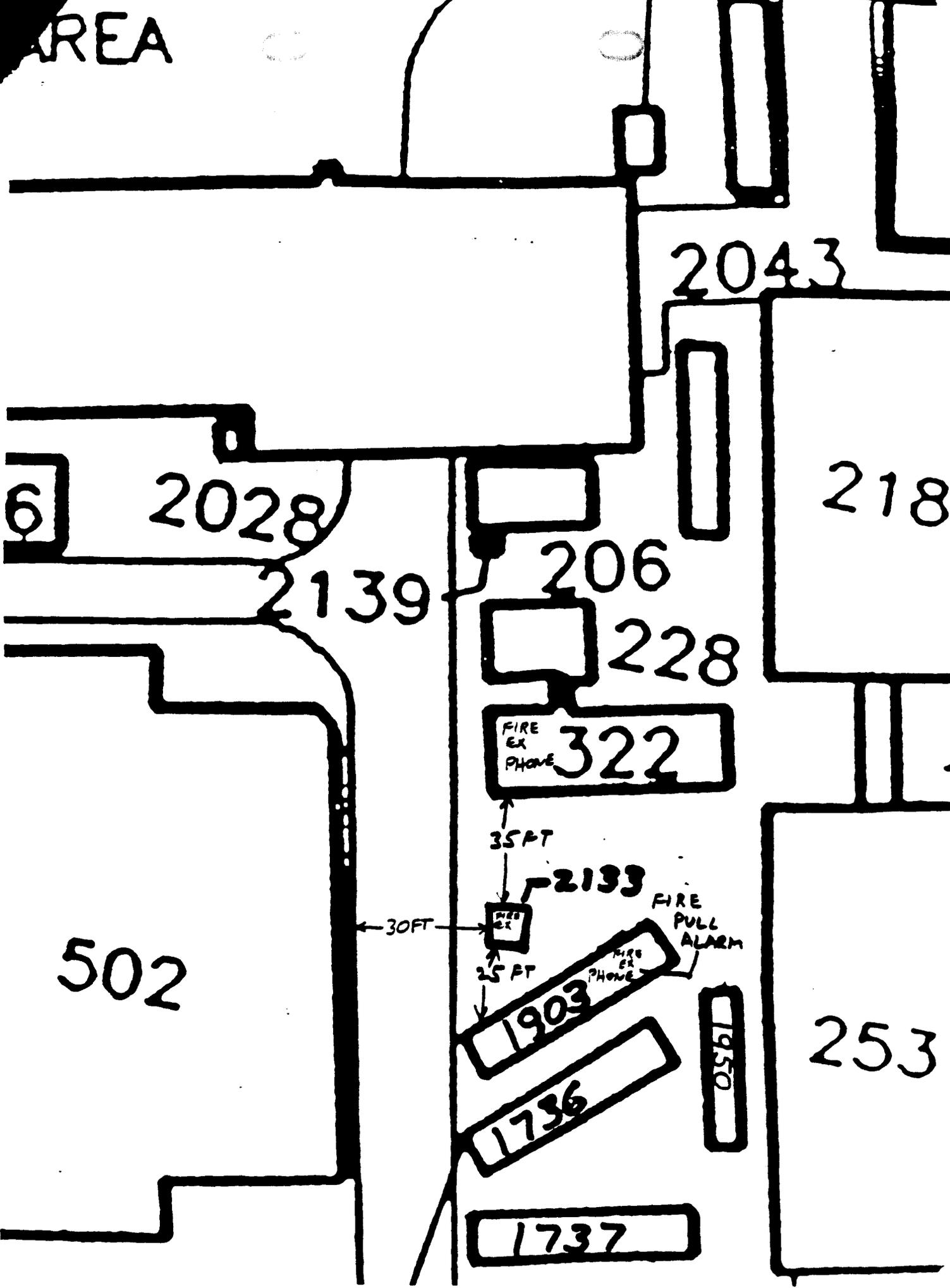
462

467

3'



AREA



2043

218

2028

206

228

2139

FIRE EX PHONE 322

35 FT

2133

FIRE PULL ALARM

30 FT

25 FT

FIRE EX PHONE 1903

502

1950

253

1736

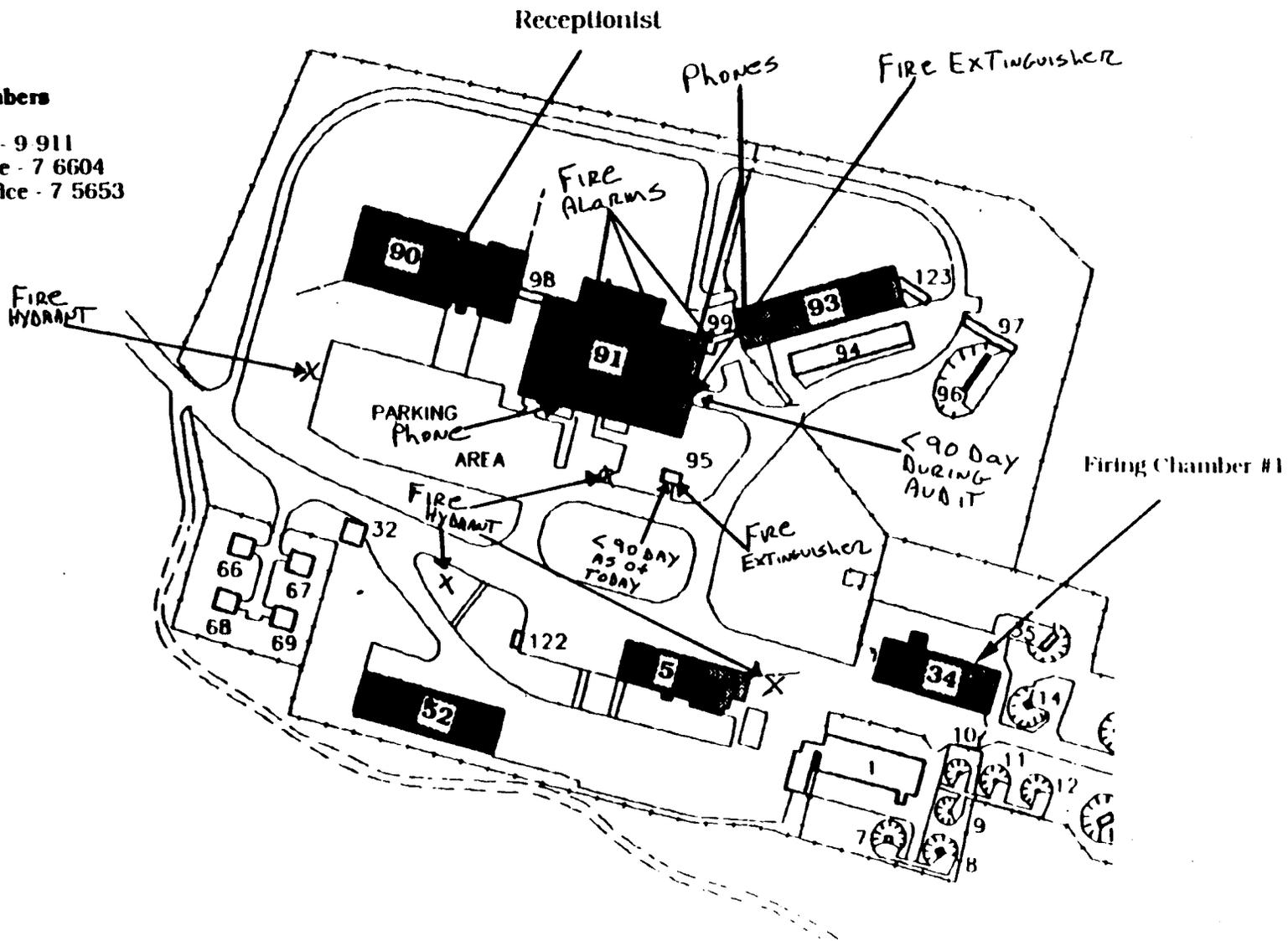
1737

ENCLOSURE
11

Map of TA-22 (TD Site)

Phone Numbers

Emergency - 9 911
 Group Office - 7 6604
 Division Office - 7 5653



ENCLOSURE
12

DX-10: SOP 196 Original	TREATMENT OF WASTE WATER FROM PRINTED CIRCUIT SHOP	05/05/94 Page 1 of 8
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DX-10

STANDARD OPERATING PROCEDURE

ROUGH DRAFT

FOR

**TREATMENT OF WASTE WATER FROM PRINTED
CIRCUIT SHOP**

SOP 196

Prepared by: _____ Date: _____
Robert Fresquez

Approved by: _____ Date: _____
DX-10 Group Leader

Approved by: _____ Date: _____
DX-DO

Approved by: _____ Date: _____
ESH-5

Final Approval: _____ Date: _____
DX-10 ES&H Officer

ROUGH DRAFT

This SOP has been approved by DX-10 and DX-Division Office. If within 30 days we have not heard from ESH-5 and other reviewing Groups as determined by ESH-5, this SOP will be considered approved and will be used as written.

ENCLOSURE
13

Los Alamos
NATIONAL LABORATORY
memorandum

Dynamic Experimentation Division
DX-10 Detonation Systems

To/MS: M. Cash, ESH-8 MS K498

Thru: D. Griechen, DX-DO MS P942

From/MS: G. Vasilik, DX-10 MS P9506-DV

Phone/FAX: 7-9293/7-6301

Symbol: DX-10-94330-

Date: July 19, 1994

SUBJECT: Response to EPA on Multi Media Audit Finding

This memo serves as documentation for answering the finding from the EPA Multi Media Compliance Investigation Report (page 33 RCRA-Hazardous Waste Management, Area of Noncompliance - TA-22-91 40CFR 265.32/262.34(a)). No internal communications or alarm system equipment was available which was capable of providing immediate emergency instruction to facility personnel:

Radios were issued on March 16, 1993 to the section that operates/inspects the treatment area and the <90 day storage area at TA-22-91. At this time, I instructed the operators/inspectors that they must have communication equipment with them whenever they are performing an operation or inspection at the treatment area and the <90 day storage area. The operators/inspectors were also instructed to have communication equipment with them during operations/inspections at the LANL-required RCRA training (received 4/29/93, and updated annually). These same requirements are reinforced in the draft SOP governing the printed circuit shop operations at TA-22-91 (DX-10-SOP-196, final approval expected in August or September 1994). The LANL ES&H Manual (AR-10-3 Appendix B Revision Dec. 7, 1992, Generator Requirements For Temporary On Site Storage Of Hazardous Waste) also states that communication equipment is required.

Anytime operators/inspectors are performing an operation or inspection at the treatment area or <90 day storage area, they carry a radio with them for instant communication with facility personnel. These radios provide direct communication to the Group Office as well as direct communication to the LANL Emergency Network.

Attached to this memo you will find the maps showing the location of the safety equipment you requested. I have listed the location of the closest phones, fire hydrants, fire alarms, and fire extinguishers to the <90 day storage area.

If you have any questions, please contact me at 667-9293 or 667-6604.

Cy: DX-10 Files
DX-10 Files(ES&H)
D. Griechen, DX-DO, MS P942
J. McAfee, DX-10, MS P950

ENCLOSURE
14

LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Battery

memorandum

TO: Group Waste Coordinators

DATE: December 23, 1991

THRU: Tom Gunderson, EM-DO, MS K491

MAIL STOP/TELEPHONE: E5177-7391
K490/5-0455

FROM: Anthony Drypolcher, EM-7 *Anthony D. Drypolcher*
Juan Corpion, EM-8 *JC*

SYMBOL: EM-8:91-874

SUBJECT: **MANAGEMENT OF LITHIUM, MERCURY, SILVER, NICKEL-CADMIUM AND GEL-CELL BATTERIES**

Lithium, mercury, silver, nickel-cadmium and gel-cell batteries used for small electronics have been found to contain heavy metals such as mercury, cadmium and silver above regulatory levels for hazardous waste. While the disposal of a few of these batteries as nonhazardous refuse is unlikely to lead to significant amounts of heavy metals leaching into the environment, the combined generation of this waste at the Laboratory may represent a substantial volume. Therefore, effective immediately, the disposal of lithium, mercury, silver, nickel-cadmium and gel-cell batteries into trash cans and dumpsters (radioactive or nonradioactive) is controlled.

Alkaline and carbon batteries have not been found to contain regulated amounts of heavy metals or other constituents and may continue to be disposed as trash (i.e. nonhazardous solid waste). Furthermore, this guidance does not apply to lead-acid batteries which are hazardous waste and recycled through Johnson Controls, Incorporated (JCI) under a contractual agreement.

In order to facilitate removal of lithium, mercury, silver, nickel-cadmium and gel-cell batteries, we recommend that a small DOT-approved, steel or polyethylene container (for example, Lab Safety Supply nos. RC-4310 or RC-8934 on page 292 in the 1991 Catalog) with a volume no greater than 5 gallons be used. The container should be placed in the nearest designated satellite accumulation area, in accordance with Administrative Requirement (AR) 10-3 (contact EM-8 for assistance). **HAZARDOUS WASTE - SPENT BATTERIES**, and accessible to all employees.

If you have any questions regarding this matter, feel free to call or drop Juan Corpion a note in **INFORM**.

TCG/JCC:smm

Cy: *KNA*
K. Hargis, EM-8, MS K490
J. Carmichael, EM-8, MS K490
A. Grieggs, EM-8, MS K490
A. Gustavsson, EM-7, MS J593
CRM-4, MS A150
Circ. File

HS

..... (AUTO)

THE FOLLOWING FILE(S) ERASED

FILE	FILE TYPE	OPTION	TEL NO.	PAGE	RESULT
062	MEMORY TX	PERSONAL CODE ****	913032362395	01/01	OK

ERRORS

- 1) HANG UP OR LINE FAIL
- 2) BUSY
- 3) NO ANSWER
- 4) NO FACSIMILE CONNECTION

LOS ALAMOS NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION (EM-8)
HAZARDOUS AND SOLID WASTE SECTION
FAX TRANSMITTAL SHEET

FAX #: (505) 665-5224

VERIFICATION #: (505) 665-0792

DATE: 12/14/93 ID # _____ LOG NO: EM-8:93-FAX-

FROM: Tony Grieggs PHONE #: (505) 665-0451

TO: Craig Kuhie FAX #: (303) 236-2395 VERIFY PHONE # (303) 236-51

GRP/ORG: NEIC

VERIFY

HSWS WGT

(AUTO)

THE FOLLOWING FILE(S) ERASED

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ERRORS

- 1) HANG UP OR LINE FAIL
- 2) BUSY
- 3) NO ANSWER
- 4) NO FACSIMILE CONNECTION

LOS ALAMOS NATIONAL LABORATORY
ENVIRONMENTAL PROTECTION (EM-8)
HAZARDOUS AND SOLID WASTE SECTION
FAX TRANSMITTAL SHEET

FAX #: (505) 665-5224

VERIFICATION #: (505) 665-0792

DATE: 12/14/93 ID # _____ LOG NO: EM-8:93-FAX-

FROM: Tony Grieggs PHONE #: (505) 665-0451

TO: Craig Kubie FAX #: (303) 236-2395 VERIFY PHONE # (303) 236-51

GRP/ORG: NEIC

VERIFY

HSWS WGT

(AUTO)

THE FOLLOWING FILE(S) ERASED

FILE	FILE TYPE	OPTION	TEL NO.	PAGE	RESULT
059	MEMORY TX	PERSONAL CODE ****	913032362395	22/22	OK

ERRORS

- 1) HANG UP OR LINE FAIL
- 2) BUSY
- 3) NO ANSWER
- 4) NO FACSIMILE CONNECTION

**LOS ALAMOS NATIONAL LABORATORY
 ENVIRONMENTAL PROTECTION (EM-8)
 HAZARDOUS AND SOLID WASTE SECTION
 FAX TRANSMITTAL SHEET**

FAX #: (505) 665-5224

VERIFICATION #: (505) 665-0792

DATE: 12/14/93 ID # _____ LOG NO: EM-8-93-FAX-

FROM: Tony Grieggs PHONE #: (505) 665-0451

TO: Craig Kubie FAX #: (303) 236-2395 VERIFY PHONE # (303) 236-5124

GRP/ORG: NEIC

VERIFY

ENCLOSURE
15



~~2390~~ ~~1000~~ 2390
Department of Energy

Field Office, Albuquerque
Los Alamos Area Office
Los Alamos, New Mexico 87544

FEB 8 1994



CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Benito Garcia, Chief
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
1190 St. Francis Drive
P. O. Box 26110
Santa Fe, NM 87502

Dear Mr. Garcia:

Enclosed for your review is the first quarterly progress report on the transuranic waste storage pad remediation project at the Los Alamos National Laboratory. This report is required by Section IX.C of the December 10, 1993 three-party Consent Agreement pursuant to compliance orders 93-01, 93-02, 93-03 and 93-04, and is being submitted by the Department of Energy (DOE) and the University of California. A preliminary report is due within 60 days of the effective date of the Consent Agreement, or February 8, 1994. In addition, the first quarterly report is due by February 15, 1994. Because the information required is identical, the enclosed contains information required for both reports. The following elements, as required by the Consent Agreement, are addressed in the enclosed report:

1. A brief description of activities completed during the reporting period to implement the requirements of this Consent Agreement.
2. A brief description of activities scheduled for the following reporting period.
3. A description of any change in key project personnel which occurred during the reporting period.
4. A description of problems encountered during the reporting period and mechanisms used or proposed for resolving the problems.
5. Tables and figures summarizing all data, sampling and test results for the period.

FEB 8 1994

Supporting documentation will be retained at DOE and will be made available to your staff upon request. If you have any questions regarding this matter, please call Jon Mack of my staff at 665-5026.

Sincerely,



Joseph C. Vozella, Chief
Environment, Safety, and Health
Branch

LESH:7JM-119

Enclosure

cc w/enclosure:

R. Nevarez, WMD, AL

cc w/o enclosure:

J. Laeser, Counsel, LAAO

D. Erickson, ESH-DO, LANL,
MS-K491

A. Gancarz, CST-DO, LANL,
MS-J515

A. Drypolcher, CST-7, LANL,
MS-E517

K. Hargis, ESH-8, LANL,
MS-K490

J. Corpion, ESH-8, LANL,
MS-K498

P. Schumann, CST-7, LANL,
MS-E539

**TRANSURANIC WASTE STORAGE RECONFIGURATION PROJECT
PRELIMINARY/QUARTERLY REPORT
REPORTING PERIOD: DEC. 10, 1993 - FEB. 15, 1994**

The Transuranic Waste Storage Reconfiguration Project (TWSRP) has been initiated at Technical Area (TA) 54, Area G, to ensure compliance with all applicable regulations and requirements concerning the storage of legacy transuranic (TRU) waste. The TWSRP involves removing TRU and TRU mixed waste from dense pack arrays under soil cover to a more inspectable configuration within storage facilities. The TWSRP will ensure all waste is moved into inspectable storage arrays by September 30, 2003. The TWSRP's mission is to ensure that compliance is met while the safety of workers, the public and the environment is protected during all phases of the retrieval and storage of the TRU waste.

I. Activities completed during the reporting period of December 10, 1993 to February 1, 1994.

1. Response to Notice of Deficiency

On December 17, the Los Alamos National Laboratory (LANL) received a Notice of Deficiency (NOD) from the New Mexico Environmental Department (NMED). The NOD requested additional information regarding the waste analysis plan, the spill control plan, and the closure plan contained in the RCRA Part B Permit Application for the project. The information was requested to address findings resulting from the NMED's review of the application. A formal response to the NOD was submitted to NMED on January 28, 1994.

2. Permit modification public meetings

On December 13, 1993, LANL held two public meetings to provide information regarding the permit modifications to the Laboratory's Hazardous Waste Permit necessary for the TWSRP. The meetings were held pursuant to the requirements of the New Mexico Hazardous Waste Management Regulations, 40 CFR §270.42. One month before the meetings were held, appropriate meeting notifications appeared in five area newspapers, and a mailing was sent to approximately 1600 people or organizations contained in the Laboratory's public participation mailing list.

The project history and technical reasons for the permit modification were presented at the meetings. Exhibit boards, a project fact sheet, copies of the view graphs were used during the presentation, and an evaluation card to seek the participants' input were distributed to aid the public's understanding of the issues. LANL staff were also present to answer additional questions.

3. Radionuclide emissions preconstruction approval request

On January 14, 1994, LANL submitted an application for preconstruction approval to the Environmental Protection Agency (EPA) pursuant to the National Emission Standards for Hazardous Air Pollutants Regulations, 40 CFR 61 Subpart H, Radionuclides. This application for preconstruction approval outlines the process and resulting off site dose consequences from the proposed TWSRP. A response from the EPA on this request is expected by March 15, 1994.

4. Preparation of Preliminary Safety Analysis Report

A Preliminary Safety Analysis Report (PSAR) has been prepared and is under review. This review is expected to be completed by May, 1994.

5. Project final design progress

The project final design is under review. Facility comments have been received and the expected completion date is dependent upon the approval of the PSAR.

6. Sampling of TRU Pad areas

An enhanced surveillance and sampling program around the TRU Pads has been ongoing since June 1993. Initial samples have been gathered. Because of limited analytical capacity at the Laboratory, additional analytical laboratories have been contracted to ensure that samples related to the project will be analyzed quickly. Sample data and related analysis will be included in subsequent quarterly reports as they become available.

7. Draft completion of the Project Management Plan and two Standard Operating Procedures

The Project Management Plan (PMP) is a working document the project manager and the project management team will use during each phase of the project to ensure compliance with appropriate regulations and procedures. This document is in draft form and is going through internal review. It is expected that this document will be reviewed and implemented by May, 1994.

The drum retrieval and crate retrieval standard operating procedures (SOPs) are now in draft form. These SOPs describe the manner in which containers will be retrieved from their current dense pack array. These documents are expected to be approved by May 1994.

8. Equipment purchases

LANL is purchasing equipment necessary for the safe retrieval and storage project. Two forklifts and a vacuum truck are presently being obtained. The Laboratory expects to have this equipment on site by September, 1994.

LANL has also obtained site support trailers, in December, 1993, which are necessary for the waste retrieval effort. These trailers are now on site at TA-54, Area G.

9. Revised project cost estimate for ten year retrieval and storage effort

Because retrieval and storage facilities have become more complex than originally planned and the retrieval schedule calls for all waste to be placed in safe and inspectable storage by September 30, 2003, a new project cost estimate was needed for long term budget planning. This was completed in December, 1993. The revised estimate for total project costs is approximately \$43,000,000.

10. Drum vent system design criteria

The design criteria for the drum vent system (DVS) is now in final review. The DVS final design is expected to be complete by April, 1994 with the DVS operational by February, 1995.

11. Drum Prep Facility upgrade

The final design for the Drum Prep Facility is complete. The construction necessary for the upgrade is planned to begin April, 1994 and will take approximately 10 weeks to complete.

II. Activities Planned for the Reporting Period of February 16, 1994 to May 15, 1994

1. The Laboratory will continue to respond to retrieval and storage facility design comments from NMED. Final design of the retrieval and storage facilities is expected by March 15, 1994.
2. The Laboratory will continue to respond and resolve review comments of the PSAR. DOE approval of the PSAR is expected by April, 1994.
3. Enhanced environmental surveillance of the TRU Pad area with TA-54 Area G will continue. Sample data will be made available for NMED's review as it is developed.
4. Draft operations documentation including the PMP, and the drum and crate removal SOPs will continue to be reviewed. Other required SOPs will be developed as necessary.
5. Required training for all contractor construction and retrieval personnel will be finalized.
6. Equipment necessary to this phase of the project will be procured.
7. The upgrade of the Drum Prep Facility will be completed.

III. Changes in key project personnel during the reporting period of December 10, 1993, to February 1, 1994.

No changes in key personnel have taken place.

IV. Problems encountered during the reporting period of December 10, 1993 to February 1, 1994.

No operational or project management related problems have occurred in this reporting period.

V. Data, sampling, and test results for the reporting period of December 10, 1993, to February 1, 1994.

As discussed in Item 6 of the completed activities for this reporting period, an enhanced surveillance and sampling program has been initiated around the TRU Pads. Increased analytical capacity has been contracted for and sample data will be included in subsequent quarterly reports as they become available.

50 Jaf Fax
Fax 505-672-9595

STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FILE COP

From HOT line

Fax 703-412-3333

FEB 23 1993

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

Mr. D. B. Redington
Director, Regulatory Management
Monsanto Company
800 N. Lindbergh Boulevard
St. Louis, Missouri 63167

Dear Mr. Redington,

Thank you for your letter dated December 15, 1992, concerning the hazardous waste storage regulations under the Resource Conservation and Recovery Act (RCRA). In your letter, you requested a clarification of the satellite accumulation provisions for hazardous waste generators (40 CFR 262.34(c)(1)), particularly for the types of wastes you described as being "generated from diverse sources throughout a facility."

We have a policy of allowing EPA Regions, and states authorized to implement the RCRA hazardous waste program, to answer site-specific inquiries about the hazardous waste regulations. However, the types of wastes you described in your letter (e.g., post-consumer items such as used nickel-cadmium batteries that exhibit a characteristic of hazardous waste), are the same types of wastes that are under consideration in an ongoing rulemaking effort within the Office of Solid Waste (OSW). Therefore, we feel it would be appropriate for us to provide you with some clarification regarding these "universal wastes" and the satellite accumulation provision under the existing generator requirements.

Based on your description of how and where these waste types are generated, it is evident that the phrase "at or near the point of generation where wastes initially accumulate" requires clarification. We agree that there may be circumstances where certain hazardous wastes, which by their mode of use are generated in small amounts throughout a facility or part of a facility, could be accumulated under the reduced requirements described at §262.34(c)(1), provided that the conditions of this regulation are met. For like wastes generated from many individual locations (e.g., nickel-cadmium batteries), we would interpret the "at or near the point of generation..." language to include a specific satellite area designated by the generator that facilitates the

¹Defines the satellite accumulation "area".

accumulation of this material prior to moving it to a designated hazardous waste storage area. A generator should be able to define the locations of waste generation being served by a satellite accumulation area (within a generator facility or part of a facility). This is to ensure that a determination can be made as to when the 55-gallon limit has been reached for a particular satellite area.

The condition that wastes accumulated under the satellite provision "be under the control of the operator of the process generating the waste" is still applicable. However, we would view this condition as being satisfied for certain "universal wastes" provided the generator demonstrates that the personnel responsible for generating and/or accumulating the waste have adequate control over the temporary storage of these wastes. The EPA recognizes that for many of these "universal wastes," the person who first takes an item out of service (e.g., an employee who replaces a dead battery used in a calculator) may not be the same person responsible for the accumulation of all of these wastes; rather, another worker may have the responsibility of overseeing the temporary storage of maintenance-related wastes. Alternatively, a maintenance worker who replaces mercury thermostats throughout a factory might also be assigned responsibility for the location at which the accumulated used thermostats are temporarily stored.

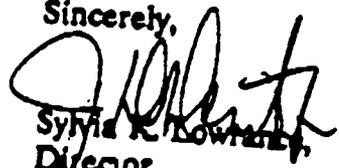
I would like to emphasize that the satellite accumulation provision was intended to accommodate situations where relatively small amounts of hazardous waste are unavoidably accumulated throughout a facility prior to placing them in designated hazardous waste storage areas; the goal is that this temporary accumulation is performed responsibly and safely, with adequate oversight and control. I would also note that we have not defined the term "universal waste" in this letter², but have instead used some examples of these wastes to clarify the satellite accumulation provision. The applicability of the satellite accumulation provision will always depend upon a generator's particular set of circumstances, which are site-specific; therefore, any questions regarding specific wastes at specific facilities are best answered by the agency implementing the RCRA program for that particular facility.

Lastly, as was mentioned above, EPA is developing standards to streamline the regulatory requirements for some of these types of "universal wastes," to facilitate the separation of these materials from the municipal waste stream, and to encourage proper treatment and/or recycling. This rule was recently published, and we have enclosed a

²The term is at this point, as you described, an "emerging term."

copy of it for your convenience. We would encourage you to read it and submit to us any comments you may have. If you have any questions on this rulemaking effort, or on any other issue discussed in this letter, please call Charlotte Mooney or Ross Elliott of my staff at (202) 260-8551. Thank you for your interest in the responsible management of hazardous waste.

Sincerely,



Sylvia K. Lowrance
Director
Office of Solid Waste

Enclosure

cc: EPA Regional Waste Management
Division Directors, I-X

JA,
What's up?
Give me a call
Hope you well
CHRIS

ENCLOSURE
16

Los Alamos
NATIONAL LABORATORY
memorandum

*Chemical Science and Technology
Responsible Chemistry for America*

CST-7L Chemical, Mixed Waste and
Decontamination Operations
Los Alamos, New Mexico 87545

To/MS: Tony Grieggs, ESH-8, K498
From/MS: John Kelly, CST-7, J593
Phone/FAX: 667-7579/665-3961
Symbol: CST-7L-94-271
Date: July 22, 1994

SUBJECT: RESPONSE TO NEIC FINDINGS REPORT

In response to finding 94-06 of the NEIC report dated June 28, 1994, I have attached copies of the Land Disposal Restriction Notification forms that were alleged to be missing from the Waste Management file storage. For the shipment on July 30, 1992, the LDR notification can be found in attachment 1. For the shipment of May 5, 1992, the LDR notifications are present in attachment 2. For the shipment originating on August 4, 1992, the LDR notifications are given in attachment 3. And lastly, for the shipment on September 24, 1992, the LDR notifications can be found in attachment 4.

There are two reasons why I believe there was a discrepancy on whether or not the notifications were present. First, the auditors did not realize that we keep dual storage for these files. Had they come to me with the manifests numbers at the time of the audit, I could have produced these records. In fact, several of the records have a red stamp indicating that they were entered into our backup file storage system (for example, see LDR notifications from August 4, 1992 shipment). Second, some of the LDR notifications did not have the manifest numbers on them (this goes along with Finding 94-06-08 which we do not contest). Therefore, it was difficult for the auditors to correlate which LDR notification went with which manifest. They needed to compare each waste code on the manifest to the corresponding waste code indicated on the LDR form. They simply did not have ample time during the audit to do this.

If you have any questions or need further clarification, please contact me at the above phone number.

JCK:sc
attachments

Cy: Paul Schumann, CST-7, w/o att., E539
CST-7 Group Office Files, w/o att., E517
CST-7L Office Files, w/att., J593

FAX

CST-7L

Chemical and Mixed Waste Operations

Date: 7/25/94

To: Tony Grieggs

Fax No: 7-5224

Phone No.: _____

SUBJECT: LDR reference number table
for NEIC Finding # 10

From: John Kelly

Fax No.: (505) 665-3961

Phone No.: (505) 667-7579

No. of Pages (Inc. Cover): 2

Modified Table 19
LDR Reference Information

Manifest Number	Date	Existing LDR		
		RES Reference	Manifest Number	Comments
00130116 11a	7/30/92	HO 55548-18	Blank	
00130116 11b	7/30/92	HO 55548-18	Blank	Waste Codes - D001, D008
00130116 11c	7/30/92	HO 55548-18	Blank	Waste Code - None
00130117	7/30/92	HO 58742	00130017, 00130018, 00130019	
00130118	7/30/92	HO 58742	00130017, 00130018, 00130019	
00130119 11a, 11b, 11c	7/30/92	HO 58742	00130017, 00130018, 00130019	
00130119 11d	7/30/92	HO 58743-80	Blank	
00130121 11a	7/30/92	HO 59081-49	00130021	
00130121 11b	7/30/92	HO 59080-40	-7001	Original number crossed out.
00130121 11c, 11d	7/30/92	HO 59082-39	00130021 -	
00103304	5/5/92	HO 51626-80	Blank	Appendix IVV
00130049	5/5/92	HO 51626-80	Blank	Appendix IVV
00130050	5/5/92	HO 51626-80	Blank	Appendix IVV
00130051	5/5/92	HO 51626-80	Blank	Appendix IVV
00130052	5/5/92	HO 51626-80	Blank	Appendix IVV
00130053	5/5/92	HO 51626-80	Blank	Appendix IVV
00130054	5/5/92	HO 51626-80	Blank	Appendix IVV
00130056	5/5/92	HO 51626-80	Blank	Appendix IVV
00130057	5/5/92	HO 51626-80	Blank	Appendix IVV
00130058	5/5/92	HO 51626-80	Blank	Appendix IVV
00130059	5/5/92	HO 51626-80	Blank	Appendix IVV
00130060	5/5/92	HO 51626-80	Blank	Appendix IVV
00130061	5/5/92	HO 51626-80	Blank	Appendix IVV
00130062	5/5/92	HO 51626-80	Blank	Appendix IVV
00130063	5/5/92	HO 51626-80	Blank	Appendix IVV
LA A 6026570	8/4/92	BR 33400	LA A 6026565, 67, 69	
LA A 6026571	8/4/92	BR 33400	LA A 6026565, 67, 69	
00103374	9/24/92	HO 58742-80	00103370-73	

ROLLINS

ENVIRONMENTAL SERVICES

Attachment 1

LAND DISPOSAL RESTRICTION NOTIFICATION (per 40 CFR 268.7)

INSTRUCTION: Complete Part I. Check and complete Part II or Part III. Complete and sign Part IV.

PART I: Generator, Reference and Manifest Information

1. Generator Name: Los Alamos National Laboratory EPA I.D. #: NM0390010
2. Address: P.O. Box 1663 MS 2593
3. City: Los Alamos State: NM Zip: 87544
4. RES Reference # (BR/HO/L/W/MO/OP): 55548-18 Manifest #: _____
5. EPA Waste Codes (list ALL applicable codes and subcategories for this stream--see reverse side for subcategories):
D001 ignitable compressed gas, D003 other

6. This stream is a _____ wastewater (<1% total organic carbon and <1% total suspended solids for most wastes) or _____ nonwastewater. If wastewater, obtain Wastewater Attachments 1, 2, and 3 from your Sales or Customer Service Representative

PART II: Wastes Subject to Land Disposal Restrictions (If the waste is non-hazardous or a "newly listed waste" identified III below, complete Part III rather than Part II.)

Pursuant to 40 CFR 268.7, I am notifying _____ RES(LA); _____ RES(NJ); RES(TX); _____ RES of LA; _____ OPC; _____ TET that under the RES Reference and manifest numbers, I am shipping to you a waste identified by the EPA waste code(s) and subcategory(ies) listed in Part I which is subject to the EPA Land Disposal Restrictions, as checked below.

- A. Check line 1, 2, 3, 4 and/or 5, as applicable
1. Treatment standard, as checked by me in Attachment 1, which I am enclosing, for _____ F001; _____ F002; _____ F004; _____ F005; _____ F009.
 2. Numerical treatment standard(s) specified in 40 CFR 268.41(a) (Table CCWE), per Attachment 3.
 3. Treatment standard(s) expressed as specified technology(ies) in 40 CFR 268.42(a), for which the required technology Attachment 3, is _____ INCIN; DEACT; _____ ADGAS fb NEUTR; _____ DMERC; _____ STABL; or, for _____ Incineration in a TOSCA-permitted incinerator (RES(TX) only).
 4. Numerical treatment standard(s) specified in 40 CFR 268.43(a) (Table CCW), per Attachment 3.
 5. This waste is (check one) _____ an "Appendix IV lab pack" or an _____ "Appendix V lab pack". I have signed required certification on page 2 of Attachment 3, which I am enclosing.

- B. Also check one or more of the following lines if applicable
6. A D001-D011 waste which (a) _____ does (b) does not meet the definition of a "California List" waste (see definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
 7. Treatment standard(s) with a "capacity variance" until May 8, 1992, per Attachment 3, as I have checked on the Attachment 3. The waste (a) _____ does (b) _____ does not meet the definition of a "California List" waste (see definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
 8. A nickel or thallium "California List" waste (see definition below). I have checked the "California List" section of Attachment 1, which I am enclosing.
 9. A specific extension or variance (other than a "capacity variance"), as I have checked on Line C or D of Attachment 2, which I am enclosing.
 10. The waste already meets relevant treatment standards. I have signed the required certification on page 2 of Attachment 3, which I am enclosing.

PART III: Wastes NOT Subject to Land Disposal Restrictions

Pursuant to 40 CFR 268.7, I am notifying _____ RES(LA); _____ RES(NJ); _____ RES(TX); _____ RES of LA; _____ OPC; _____ TET that, under the reference and manifest numbers, I am shipping to you a waste which is non-hazardous and/or identified by the EPA waste code in Part I above. The waste is not subject to the Land Disposal Restrictions because the waste is non-hazardous and/or consists of one or more of the following EPA waste codes listed since November 8, 1984: D018-43, F032, F034-35, F037-38, K064-66, K088, K090-91, K117-18, K123-26, K131-32, K136, U328, U353, U359 or other codes listed since 6/18/91.

PART IV: Authorized Representative

Signature: Andrew J. Mantoya Date: 7-30-92
Print or Type Name: Andrew J. Mantoya
Title: Staff Member

NOTE: A "California List" waste is (a) a hazardous waste containing Halogenated Organic Compounds at a concentration of 1000 mg/l, or greater; or (b) a liquid hazardous waste (including free liquids) having a pH equal to or less than 2.0 or containing a following materials at a concentration equal to or greater than specified: PCB's, 50 ppm; or (in mg/l) free cyanides, 1000; As, 500; Cd, 100; Pb, 500; Hg, 20; Ni, 134; Se, 100; Tl, 130.



2861 10 100

OCT 01 1992

Attachment 2 1 m 285

ROLLINS CHEMPAK INC.

NOTIFICATION per 40 CFR 268.7 for APPENDIX IV/V LAB PACKS ONLY

PART I: Generator and Manifest Information

Generator Name: Los Alamos National Laboratory

Address: P.O. Box 1663 MSJ 593

City: Los Alamos State: NM Zip Code: 87545

Telephone: area code (505)- 667-7579 EPA ID#: NM0890010575

STATE Manifest #(s): RES Stream (one only) # H057626-60

PART II: Waste Subject to Land Disposal Restrictions:

Pursuant to 40 CFR 268.7 I am notifying the following facility (check one):

- Rollins Environmental Services (TX)
o Rollins Environmental Services (NJ)
o OPC
o TET;

that under the above RES stream number and State Manifest Number(s), I am shipping to you a waste identified by the EPA waste numbers circled on attached page 2-list of applicable waste codes-, which are subject to the EPA Land Disposal Restrictions. These wastes were prepared in accordance to 40 CFR 268.42 and are:(Check 1a,1b or both)

1a. Lab packs containing only waste listed in 40 CFR 268, Appendix IV, and may contain appropriate non-RCRA solid waste. (Check statement 2-Part III). These lab packs must be treated in accordance with 268.42(b) by INCIN*, followed by treatment of D004-008, D010,D011 metals per 268.41(a). These lab packs contain the below checked metals:

- D004 D005 D006 D007 D008 D010 D011

1b. Lab packs containing only organic wastes listed in 40 CFR 268, Appendix V, and may contain appropriate non-RCRA solid waste. (Check statement 3-Part III) These lab packs must be treated in accordance with 268.42(b) by INCIN.*

PART III: Authorized Representative (Check 2,3 or both as indicated above and sign)

2. I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only the wastes specified in Appendix IV to Part 268 or solid waste not subject to regulations under Part 261. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

3. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste and that the lab pack contains only organic wastes specified in Appendix V to Part 268 or solid waste not subject to regulations under Part 261. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

Signature: Andrew J. Montoya Date: 5-5-92

Print or Type Name: Andrew J. Montoya

Title: Staff Member

* INCIN=Incineration in a RCRA subpart O facility

All information must be completed and signed by generator.

Attachment 3

BR / NON AE
7.18.1M299

ROLLINS

ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTION NOTIFICATION (per 40 CFR 268.7)

INSTRUCTION: Complete Part I. Check and complete Part II or Part III. Complete and sign Part IV.

PART I: Generator, Reference and Manifest Information

- Generator Name: LOS ALAMOS NATIONAL LABORATORY EPA I.D. #: NM0890010515
- Address: PO BOX 1663, MS J593
- City: LOS ALAMOS State: NM Zip: 87545
- RES Reference * (BR)HO/L/W/MO/OP: 33400 Manifest #: LAA6026565, 67, 68
- EPA Waste Codes (list ALL applicable codes and subcategories for this stream--see reverse side for subcategories):
D001 / D002 / D004 / D005 / D006 / D007 / D008 / D009 / D010 / D011

6. This stream is a wastewater (<1% total organic carbon and <1% total suspended solids for most wastes) or nonwastewater. If wastewater, obtain Wastewater Attachments 1, 2, and 3 from your Sales or Customer Service Representative.

PART II: Wastes Subject to Land Disposal Restrictions (If the waste is non-hazardous or a "newly listed waste" identified in Part III below, complete Part III rather than Part II.)

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that under the above RES Reference and manifest numbers, I am shipping to you a waste identified by the EPA waste code(s) and subcategory(ies) listed in Part I above, which is subject to the EPA Land Disposal Restrictions, as checked below.

A. Check line 1, 2, 3, 4 and/or 5, as applicable.

- Treatment standard, as checked by me in Attachment 1, which I am enclosing, for F001; F002; F003; F004; F005; F039.
- Numerical treatment standard(s) specified in 40 CFR 268.41(a) (Table CCWE), per Attachment 3.
- Treatment standard(s) expressed as specified technology(ies) in 40 CFR 268.42(a), for which the required technology, per Attachment 3, is INCIN; DEACT; ADGAS fb NEUTR; IMERC; STABL; or, for PCBs, Incineration in a TOSCA-permitted incinerator (RES(TX) only).
- Numerical treatment standard(s) specified in 40 CFR 268.43(a) (Table CCW), per Attachment 3.
- This waste is (check one) an "Appendix IV lab pack" or an "Appendix V lab pack". I have signed the required certification on page 2 of Attachment 2, which I am enclosing.

B. Also check one or more of the following lines if applicable.

- A D001-D011 waste which (a) does (b) does not meet the definition of a "California List" waste (see definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
- Treatment standard(s) with a "capacity variance" until May 8, 1993, per Attachment 3, as I have checked on the enclosed Attachment 2. The waste (a) does (b) does not meet the definition of a "California List" waste (see definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
- A nickel or thallium "California List" waste (see definition below). I have checked the "California List" section of Attachment 1, which I am enclosing.
- A specific extension or variance (other than a "capacity variance"), as I have checked on Line C or D of Attachment 2, which I am enclosing.
- The waste already meets relevant treatment standards. I have signed the required certification on page 2 of Attachment 2, which I am enclosing.

PART III: Wastes NOT Subject to Land Disposal Restrictions

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that, under the above reference and manifest numbers, I am shipping to you a waste, which is non-hazardous and/or identified by the EPA waste code(s) listed in Part I above. The waste is not subject to the Land Disposal Restrictions because the waste is non-hazardous and/or consists only of one or more of the following EPA waste codes listed since November 8, 1984: D018-43, F032, F034-35, F037-38, K064-66, K088, K090-91, K107-112, K117-18, K123-26, K131-32, K136, U328, U353, U359 or other codes listed since 5/15/91.

PART IV: Authorized Representative

Signature: Andrew J. Montoya Date: 8-4-92

Print or Type Name: Andrew J. Montoya

Title: Staff Member

NOTE: A "California List" waste is (a) a hazardous waste containing Halogenated Organic Compounds at a concentration of 1000 mg/kg or mg/l, or greater; or (b) a liquid hazardous waste (including free liquids) having a pH equal to or less than 2.0 or containing any of the following materials at a concentration equal to or greater than specified: PCB's, 50 ppm; or (in mg/l) free cyanides, 1000; As, 500; Cd, 100; Cr, 500;

TECHNOLOGY STANDARD REFERENCE
Nonwastewaters Only

7.18.1m299
ATTACHMENT 3

TABLE LEGEND 007 1 1992

EPA WASTE CODE SUFFIX

A : Aqueous	U6 : Low Solubility (1240 mg/kg) Subcategory
AL : Alkaline	U7 : Low Solubility (1240)
C : Corrosive	U8 : No Data Subcategory
CB : Calcium Borates	U9 : Non-Ca Low Solubility Subcategory
CS : Calcium Sulfate Subcategory	U10 : Nonwastewater
E : Explosive	U11 : Solid
HA : Amorphous	U12 : Residue
H1 : High Solubility (1250 mg/kg)	U13 : Residual Crystalline Subcategory
H2 : High Zn (1251) Subcategory	U14 : Residual Sulfide Subcategory
LB : Lead Acid Battery	U15 : Solid
LR : Lead Residue (127) Subcategory	U16 : Water Resistant
L10 : Lead	U17 : Municipal Treatment Standard

TECHNOLOGY CODES AND DEFINITIONS OF TECHNOLOGY BASED STANDARDS

ACCAS : Meeting of Acceptance Goals followed by Neutralization.
(INCIN Acceptable Technology)
DEACT : Destruction of Hazardous Character of so (HCN Acceptable Technology)
INERC : Incineration of Organic and Inorganic Contaminated waste
INCIN : Incineration
STABL : Stabilization

COLUMN HEADING DESCRIPTIONS

COLUMN 1 : EPA Waste Code Number and Suffix (if applicable)
COLUMN 2 : Waste Res Nonwastewater Treatment Standards Expressed as Concentrations in Waste Stream
COLUMN 3 : Specified Technology Based Standards
COLUMN 4 : Waste Res Nonwastewater Treatment Standards Expressed as Waste Concentrations
COLUMN 5 : Determined Effective Dates of Surface Disposed waste Regulated in the Land Disposal Regulations (LDR)

- NOTES:
- Refer to last page of Attachment 3 for "possibly variances data" on soil and debris wastes
 - Resistive hazardous and waste not referenced (RES not permitted)
 - Waste subject listed since November 8, 1990 and not in the table below are currently not regulated under LDR
 - Some non-hazardous wastes which are listed "Do Not Accept" below may be acceptable if some RES plants in lab tests or very small quantities. Check with Plant Technical Manager.

(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
EPA CODE NUMBER	NO CFR 268.91 (CCME) TECH	NO CFR 268.92 (CCM)	NO CFR 268.93 (CCM)	CAPACITY VARIANCE DEFERRED EFF DATE	EPA CODE NUMBER	NO CFR 268.91 (CCME) TECH	NO CFR 268.92 (CCM)	NO CFR 268.93 (CCM)	CAPACITY VARIANCE DEFERRED EFF DATE
0001 CAS		DEACT			0002R		DEACT		
0001L10 1/0R TDC		DEACT			0001	X		X	5/8/92
0001L10 1/0R TDC		INCIN			0003	X			
0001R		DEACT			0006S			DO NOT ACCEPT	
0001R		DEACT			0007	X			
0002AC10		DEACT			0006S			DO NOT ACCEPT	
0002ALK		DEACT			0008	X			
0002C		DEACT			0009R			DO NOT ACCEPT	
0002S		DO NOT ACCEPT			0005L	X			5/8/92
0003R		DEACT			0011	X			
0003AC		X			0011	X			
0003R		DEACT			0012			X	

(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
EPA CODE NUMBER	NO CFR 268.91 (CCME) TECH	NO CFR 268.92 (CCM)	NO CFR 268.93 (CCM)	CAPACITY VARIANCE DEFERRED EFF DATE	EPA CODE NUMBER	NO CFR 268.91 (CCME) TECH	NO CFR 268.92 (CCM)	NO CFR 268.93 (CCM)	CAPACITY VARIANCE DEFERRED EFF DATE
0012		X			0008R	X			
0014		X			0007	X			
0015		X			0008	X			
0016		X			0009			X	
0017		X			0010			X	
0001	X	X			0011	X			
0002	X	X			0012			X	
0003	X	X			0014			X	
0004	X	X			0015	X		X	
0006	X	X			0017			X	
0007	X	X			0018			X	
0008	X	X			0019			X	
0009	X	X			0020			X	
0010	X	X			0021	X		X	
0011	X	X			0022	X		X	
0012	X	X			0023			X	
0019	X	X			0024			X	
0020		DO NOT ACCEPT			0025		INCIN		
0021		DO NOT ACCEPT			0026		INCIN		
0022		DO NOT ACCEPT			0027		INCIN		
0023		DO NOT ACCEPT			0028	X		X	
0024	X	INCIN	X		0029			X	
0025		X			0030			X	
0026		DO NOT ACCEPT			0031	X			5/8/92
0027		DO NOT ACCEPT			0032			X	
0028		DO NOT ACCEPT			0033			X	
0029	X	X		5/8/92	0034			X	
0001	X	X			0035			X	
0002	X	X			0036			X	
0003	X	X			0037			X	
0004	X	X			0038			X	
0005	X	X			0039		INCIN		
0006A	X	X			0040			X	

(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
EPA CODE NUMBER	NO CFR 268.91 (CCME) TECH	NO CFR 268.92 (CCM)	NO CFR 268.93 (CCM)	CAPACITY VARIANCE DEFERRED EFF DATE	EPA CODE NUMBER	NO CFR 268.91 (CCME) TECH	NO CFR 268.92 (CCM)	NO CFR 268.93 (CCM)	CAPACITY VARIANCE DEFERRED EFF DATE
K001					K102				
K002					K103				
K003		DO NOT ACCEPT			K104				
K004		DEACT			K105				
K005		DEACT			K106M			DO NOT ACCEPT	
K006	X				K106LH	X			5/8/92
K007		DEACT			K113		INCIN		
K008	X	X			K114		INCIN		
K009	X	X			K115	X	INCIN		
K030	X	X			K116		INCIN		
K031	X	X			P001		INCIN		
K032	X	X			P002		INCIN		
K060					P003		INCIN		
K061H2		DO NOT ACCEPT			P004			X	
K061L2	X				P005		INCIN		
K062	X				P006		INCIN		
K069C	X				P007		INCIN		
K069CS		DO NOT ACCEPT			P008		INCIN		
K071M		DO NOT ACCEPT			P009		INCIN		
K071LH	X				P010	X			5/8/92
K072			X		P011	X			5/8/92
K083	X	X	X		P012	X			5/8/92
K084	X			5/8/92	P013	X		X	
K085			X		P014		INCIN		
K086	X		X		P015		DO NOT ACCEPT		
K087	X		X		P016		INCIN		
K088	X		X		P017		INCIN		
K089			X		P018		INCIN		
K095			X		P020			X	
K096			X		P021			X	
K097			X		P022		INCIN		
K098			X		P023		INCIN		
K099			X		P024			X	
K100	X				P025		INCIN		
K101	X		X	5/8/92	P026		INCIN		

(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
EPA CODE NUMBER	NO CFR 268.91 (CCME) TECH	NO CFR 268.92 (CCM)	NO CFR 268.93 (CCM)	CAPACITY VARIANCE DEFERRED EFF DATE	EPA CODE NUMBER	NO CFR 268.91 (CCME) TECH	NO CFR 268.92 (CCM)	NO CFR 268.93 (CCM)	CAPACITY VARIANCE DEFERRED EFF DATE
P028			INCIN		P066		INCIN		
P029			X		P068		INCIN		
P030			X		P070		INCIN		
P031			INCIN		P071			X	
P032			INCIN		P072		INCIN		
P034			INCIN		P073	X			
P036	X			5/8/92	P074	X		X	
P037			X		P075		INCIN		
P038	X			5/8/92	P076		ROGAS		
P039			X		P077			X	
P040			INCIN		P078		ROGAS		
P041			INCIN		P081		INCIN		
P042			INCIN		P082		INCIN		
P043			INCIN		P084		INCIN		
P044	X		INCIN		P085		INCIN		
P045			INCIN		P087		DO NOT ACCEPT AFTER 5/8/92		
P046			INCIN		P088		INCIN		
P047			INCIN	X	P089			X	
P048				X	P093M		DO NOT ACCEPT		
P049			INCIN		P093LH	X	INCIN		5/8/92
P050			X		P095		INCIN		
P051			X		P096		INCIN		
P052			INCIN		P097			X	
P053			INCIN		P098			X	
P054			INCIN		P099	X			
P054M			DO NOT ACCEPT		P101			X	
P054LH	X		INCIN	5/8/92	P102		INCIN		
P066			INCIN		P103	X			
P067			INCIN		P104	X		X	

NOTIFICATION per 40 CFR 268.7 for APPENDIX IV/V LAB PACKS ONLY

State Manifest #(s):

RES Stream #: H058742

APPENDIX IV WASTE CODES

D001	D002	D003	D005	D006	D007	D008	D011
F001	F002	F003	F005	U002	U003	U080	U188
D022	D040						

TREATMENT STANDARD REFERENCE TABLE Nonwastewaters Only

ATTACHMENT

TABLE LEGEND

EPA WASTE CODES SUMMARY:

- A : Acetone
- ALX : Alkaline
- C : Corrosive
- CS : Colored Solvent
- CS : Colored Sulfate Subcategory
- E : Explosive
- H : Hazardous
- HE : High Mercury (≥250 ug/l)
- HE : High Zn (≥100 ug/l) Subcategory
- LA : Lead Acid Battery
- LA : Lead Acetate (≥10) Subcategory
- LH : Liquor

- L2 : Low Mercury (<250 ug/l) Subcategory
- L2 : Low Zn (<100 ug/l)
- MS : No Acid Subcategory
- MS : Non-Corrosive Sulfate Subcategory
- MS : Nonwastewater
- OS : Oxidizer
- R : Reactive
- RC : Reactive Crude Oil Subcategory
- RS : Reactive Sulfide Subcategory
- S : Solid
- SR : Motor Reactive
- T : Municipal Treatment Standard

TECHNOLOGY CODES AND DEFINITIONS OF TECHNOLOGY BASED STANDARDS:

- MSNR : Testing of Concentrated Solids followed by neutralization, (INCIN Acceptable Technology)
- MSAT : Neutralization of Hazardous Characteristics (INCIN Acceptable Technology)
- MSRC : Incineration of Organics and Mercury Contaminated wastes
- INCIN : Incineration
- STAB : Stabilization

COLUMN HEADLINE DESCRIPTIONS:

- COLUMN 1 : EPA Waste Code Number and Suffix (if applicable)
- COLUMN 2 : Waste and Municipal Treatment Standards Expressed as Concentration in Waste
- COLUMN 3 : Specific Technology Based Standards
- COLUMN 4 : Waste and Municipal Treatment Standards Expressed as Waste Concentration
- COLUMN 5 : Preferred Effective Dates of Surface Storage wastes Reported in the Land Disposal Regulations (LDR)

- NOTE:**
- Refer to last page of Attachment 3 for "capacity variance data" on soil and debris wastes.
 - Respective hazardous waste codes not referenced (RSD not permitted).
 - Waste codes listed under Section 8, 1004 and set in the table below are correct; not regulated under LDR.
 - Some hazardous waste codes are marked "Do not accept" below and are acceptable at some RSD plants in job packs or very small quantities. Check with Plant Technical Manager.

(1)	(2)	(3)	(4)	(5)
EPA CODE NUMBER	NO CFR 261.11 (CCME) TECH	NO CFR 261.12 (CCM) TECH	NO CFR 261.13 (CCM) TECH	CAPACITY VARIANCE REPORTED EFF. DATE
0001		DEACT		
0002		DEACT		
0003		DEACT		
0004		DEACT		
0005		DEACT		
0006		DEACT		
0007		DEACT		
0008		DEACT		
0009		DEACT		
0010		DEACT		
0011		DEACT		
0012		DEACT		
0013		DEACT		
0014		DEACT		
0015		DEACT		
0016		DEACT		
0017		DEACT		
0018		DEACT		
0019		DEACT		
0020		DEACT		
0021		DEACT		
0022		DEACT		
0023		DEACT		
0024		DEACT		
0025		DEACT		
0026		DEACT		
0027		DEACT		
0028		DEACT		
0029		DEACT		
0030		DEACT		
0031		DEACT		
0032		DEACT		
0033		DEACT		
0034		DEACT		
0035		DEACT		
0036		DEACT		
0037		DEACT		
0038		DEACT		
0039		DEACT		
0040		DEACT		
0041		DEACT		
0042		DEACT		
0043		DEACT		
0044		DEACT		
0045		DEACT		
0046		DEACT		
0047		DEACT		
0048		DEACT		
0049		DEACT		
0050		DEACT		
0051		DEACT		
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0053		DEACT		
0054		DEACT		
0055		DEACT		
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0058		DEACT		
0059		DEACT		
0060		DEACT		
0061		DEACT		
0062		DEACT		
0063		DEACT		
0064		DEACT		
0065		DEACT		
0066		DEACT		
0067		DEACT		
0068		DEACT		
0069		DEACT		
0070		DEACT		
0071		DEACT		
0072		DEACT		
0073		DEACT		
0074		DEACT		
0075		DEACT		
0076		DEACT		
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0080		DEACT		
0081		DEACT		
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0100		DEACT		
0101		DEACT		
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0112		DEACT		
0113		DEACT		
0114		DEACT		
0115		DEACT		
0116		DEACT		
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0123		DEACT		
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0125		DEACT		
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0134		DEACT		
0135		DEACT		
0136		DEACT		
0137		DEACT		
0138		DEACT		
0139		DEACT		
0140		DEACT		
0141		DEACT		
0142		DEACT		
0143		DEACT		
0144		DEACT		
0145		DEACT		
0146		DEACT		
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0166		DEACT		
0167		DEACT		
0168		DEACT		
0169		DEACT		
0170		DEACT		
0171		DEACT		
0172		DEACT		
0173		DEACT		
0174		DEACT		
0175		DEACT		
0176		DEACT		
0177		DEACT		
0178		DEACT		
0179		DEACT		
0180		DEACT		
0181		DEACT		
0182		DEACT		
0183		DEACT		
0184		DEACT		
0185		DEACT		
0186		DEACT		
0187		DEACT		
0188		DEACT		
0189		DEACT		
0190		DEACT		
0191		DEACT		
0192		DEACT		
0193		DEACT		
0194		DEACT		
0195		DEACT		
0196		DEACT		
0197		DEACT		
0198		DEACT		
0199		DEACT		
0200		DEACT		

(1)	(2)	(3)	(4)	(5)
EPA CODE NUMBER	NO CFR 261.11 (CCME) TECH	NO CFR 261.12 (CCM) TECH	NO CFR 261.13 (CCM) TECH	CAPACITY VARIANCE REPORTED EFF. DATE
0201		DEACT		
0202		DEACT		
0203		DEACT		
0204		DEACT		
0205		DEACT		
0206		DEACT		
0207		DEACT		
0208		DEACT		
0209		DEACT		
0210		DEACT		
0211		DEACT		
0212		DEACT		
0213		DEACT		
0214		DEACT		
0215		DEACT		
0216		DEACT		
0217		DEACT		
0218		DEACT		
0219		DEACT		
0220		DEACT		
0221		DEACT		
0222		DEACT		
0223		DEACT		
0224		DEACT		
0225		DEACT		
0226		DEACT		
0227		DEACT		
0228		DEACT		
0229		DEACT		
0230		DEACT		
0231		DEACT		
0232		DEACT		
0233		DEACT		
0234		DEACT		
0235		DEACT		
0236		DEACT		
0237		DEACT		
0238		DEACT		
0239		DEACT		
0240		DEACT		
0241		DEACT		
0242		DEACT		
0243		DEACT		
0244		DEACT		
0245		DEACT		
0246		DEACT		
0247		DEACT		
0248		DEACT		
0249		DEACT		
0250		DEACT		
0251		DEACT		
0252		DEACT		
0253		DEACT		
0254		DEACT		
0255		DEACT		
0256		DEACT		
0257		DEACT		
0258		DEACT		
0259		DEACT		
0260		DEACT		
0261		DEACT		
0262		DEACT		
0263		DEACT		
0264		DEACT		
0265		DEACT		
0266		DEACT		
0267		DEACT		
0268		DEACT		
0269		DEACT		
0270		DEACT		
0271		DEACT		
0272		DEACT		
0273		DEACT		
0274		DEACT		
0275		DEACT		
0276		DEACT		
0277		DEACT		
0278		DEACT		
0279		DEACT		
0280		DEACT		
0281		DEACT		
0282		DEACT		
0283		DEACT		
0284		DEACT		
0285		DEACT		
0286		DEACT		
0287		DEACT		
0288		DEACT		
0289		DEACT		
0290		DEACT		
0291		DEACT		
0292		DEACT		
0293		DEACT		
0294		DEACT		
0295		DEACT		
0296		DEACT		
0297		DEACT		
0298		DEACT		
0299		DEACT		
0300		DEACT		

(1)	(2)	(3)	(4)	(5)
EPA CODE NUMBER	NO CFR 261.11 (CCME) TECH	NO CFR 261.12 (CCM) TECH	NO CFR 261.13 (CCM) TECH	CAPACITY VARIANCE REPORTED EFF. DATE
0301		DEACT		
0302		DEACT		
0303		DEACT		
0304		DEACT		
0305		DEACT		
0306		DEACT		
0307		DEACT		
0308		DEACT		
0309		DEACT		
0310		DEACT		
0311		DEACT		
0312		DEACT		
0313		DEACT		
0314		DEACT		
0315		DEACT		
0316		DEACT		
0317		DEACT		
0318		DEACT		
0319		DEACT		
0320		DEACT		
0321		DEACT		
0322		DEACT		
0323		DEACT		
0324	</			

ROLLINS

ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTION NOTIFICATION (per 40 CFR 268.7)

INSTRUCTION: Complete Part I. Check and complete Part II or Part III. Complete and sign Part IV.

PART I: Generator, Reference and Manifest Information

1. Generator Name: Los Alamos National Laboratory EPA I.D. #: NM08900
2. Address: P.O. Box 1663 MS 5593
3. City: Los Alamos State: NM Zip: 87544
4. RES Reference # (BR/ HO /L/W/MO/OP): 55548-18 Manifest #: _____
5. EPA Waste Codes (list ALL applicable codes and subcategories for this stream--see reverse side for subcategories):
None

6. This stream is a _____ wastewater (<1% total organic carbon and <1% total suspended solids for most wastes) or nonwastewater. If wastewater, obtain Wastewater Attachments 1, 2, and 3 from your Sales or Customer Service Representative.

PART II: Wastes Subject to Land Disposal Restrictions (If the waste is non-hazardous or a "newly listed waste" identified III below, complete Part III rather than Part II)

Pursuant to 40 CFR 268.7, I am notifying RES(LA): _____ RES(NJ): _____ RES(TX): _____ RES of LA: _____ OPC: _____ TET that under the RES Reference and manifest numbers, I am shipping to you a waste identified by the EPA waste code(s) and subcategory(ies) listed in Part I which is subject to the EPA Land Disposal Restrictions, as checked below.

A. Check line 1, 2, 3, 4 and/or 5 as applicable

- _____ 1. Treatment standard, as checked by me in Attachment 1, which I am enclosing, for _____ F001; _____ F002; _____ F004; _____ F005; _____ F039.
- _____ 2. Numerical treatment standard(s) specified in 40 CFR 268.41(a) (Table CCWE), per Attachment 3.
- _____ 3. Treatment standard(s) expressed as specified technology(ies) in 40 CFR 268.42(a), for which the required technology Attachment 3, is _____ INCIN; _____ DEACT; _____ ADGAS fb NEUTR; _____ DMERC; _____ STABL; or, for _____ Incineration in a TOSCA-permitted incinerator (RES(TX) only).
- _____ 4. Numerical treatment standard(s) specified in 40 CFR 268.43(a) (Table CCW), per Attachment 3.
- _____ 5. This waste is (check one) _____ an "Appendix IV lab pack" or an _____ "Appendix V lab pack". I have signed required certification on page 3 of Attachment 2, which I am enclosing.

B. Also check one or more of the following lines if applicable

- _____ 6. A D001-D011 waste which (a) _____ does (b) _____ does not meet the definition of a "California List" waste definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
- _____ 7. Treatment standard(s) with a "capacity variance" until May 8, 1992, per Attachment 3, as I have checked on the en Attachment 2. The waste (a) _____ does (b) _____ does not meet the definition of a "California List" waste definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
- _____ 8. A nickel or thallium "California List" waste (see definition below). I have checked the "California List" section of Attachment 1, which I am enclosing.
- _____ 9. A specific extension or variance (other than a "capacity variance"), as I have checked on Line C or D of Attachment 2, which I am enclosing.
- _____ 10. The waste already meets relevant treatment standards. I have signed the required certification on page 2 of Attachment 2, which I am enclosing.

PART III: Wastes NOT Subject to Land Disposal Restrictions

Pursuant to 40 CFR 268.7, I am notifying RES(LA): _____ RES(NJ): _____ RES(TX): _____ RES of LA: _____ OPC: _____ TET that, under the reference and manifest numbers, I am shipping to you a waste which is non-hazardous and/or identified by the EPA waste code(s) in Part I above. The waste is not subject to the Land Disposal Restrictions because the waste is non-hazardous and/or consists only or more of the following EPA waste codes listed since November 8, 1984: D018-43, F032, F034-35, F037-38, K064-66, K088, K090-91, K117-18, K123-26, K131-32, K136, U328, U353, U359 or other codes listed since 5/15/91.

PART IV: Authorized Representative

Signature Andrew J. Montoya Date 7-30-92
Print or Type Name Andrew J. Montoya
Title Staff Member

NOTE: A "California List" waste is (a) a hazardous waste containing Halogenated Organic Compounds at a concentration of 1000 mg/l, or greater; or (b) a liquid hazardous waste (including free liquids) having a pH equal to or less than 2.0 or containing any following materials at a concentration equal to or greater than specified: PCB's, 50 ppm; or (in mg/l) free cyanides, 1000; As, 500; Cd, 100; Pb, 500; Hg, 20; Ni, 134; Se, 100; Tl, 130.

ROLLINS

ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTION NOTIFICATION (per 40 CFR 268.7)

INSTRUCTION: Complete Part I. Check and complete Part II or Part III. Complete and sign Part IV.

PART I: Generator, Reference and Manifest Information

1. Generator Name: Los Alamos National Laboratory EPA I.D. #: UNCSA0010
2. Address: P.O. Box 1663 MS 2593
3. City: Los Alamos State: NM Zip: 8754
4. RES Reference # (BR/HO/L/W/MO/OP): 59082-39 Manifest #: 00130021
5. EPA Waste Codes (list ALL applicable codes and subcategories for this stream--see reverse side for subcategories):
None

6. This stream is a _____ wastewater (<1% total organic carbon and <1% total suspended solids for most wastes) or nonwastewater. If wastewater, obtain Wastewater Attachments 1, 2, and 3 from your Sales or Customer Service Representative.

PART II: Wastes Subject to Land Disposal Restrictions (If the waste is non-hazardous or a "newly listed waste" identified III below, complete Part III rather than Part II.)

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that under the RES Reference and manifest numbers, I am shipping to you a waste identified by the EPA waste code(s) and subcategory(ies) listed in Part I which is subject to the EPA Land Disposal Restrictions, as checked below.

A. Check line 1, 2, 3, 4 and/or 5, as applicable

1. Treatment standard, as checked by me in Attachment 1, which I am enclosing, for F001; F002; F004; F005; F039.
2. Numerical treatment standard(s) specified in 40 CFR 268.41(a) (Table CCWE), per Attachment 3.
3. Treatment standard(s) expressed as specified technology(ies) in 40 CFR 268.42(a), for which the required technology, Attachment 3, is INCIN; DEACT; ADGAS fb NEUTR; IMERC; STABL; or, for Incineration in a TOSCA-permitted incinerator (RES(TX) only).
4. Numerical treatment standard(s) specified in 40 CFR 268.43(a) (Table CCW), per Attachment 3.
5. This waste is (check one) an "Appendix IV lab pack" or an "Appendix V lab pack". I have signed required certification on page 2 of Attachment 2, which I am enclosing.

B. Also check one or more of the following lines if applicable

6. A D001-D011 waste which (a) does (b) does not meet the definition of a "California List" waste (definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
7. Treatment standard(s) with a "capacity variance" until May 8, 1992, per Attachment 3, as I have checked on the Attachment 2. The waste (a) does (b) does not meet the definition of a "California List" waste (definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
8. A nickel or thallium "California List" waste (see definition below). I have checked the "California List" section of Attachment 1, which I am enclosing.
9. A specific extension or variance (other than a "capacity variance"), as I have checked on Line C or D of Attachment 2, which I am enclosing.
10. The waste already meets relevant treatment standards. I have signed the required certification on page 2 of Attachment 2, which I am enclosing.

PART III: Wastes NOT Subject to Land Disposal Restrictions

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that, under the reference and manifest numbers, I am shipping to you a waste which is non-hazardous and/or identified by the EPA waste code in Part I above. The waste is not subject to the Land Disposal Restrictions because the waste is non-hazardous and/or consists of one or more of the following EPA waste codes listed since November 8, 1984: D018-43, F032, F034-35, F037-38, K064-66, K088, K090-91, K117-18, K123-26, K131-32, K136, U328, U553, U359 or other codes listed since 5/15/91.

PART IV: Authorized Representative

Signature Andrew J. Montoya Date 7-30-92
Print or Type Name Andrew J. Montoya
Title Staff Member

NOTE: A "California List" waste is (a) a hazardous waste containing Halogenated Organic Compounds at a concentration of 1000 mg/l, or greater; or (b) a liquid hazardous waste (including free liquids) having a pH equal to or less than 2.0 or containing the following materials at a concentration equal to or greater than specified: PCB's, 50 ppm; or (in mg/l) free cyanides, 1000; As, 500; Cd, 1

ROLLINS

ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTION NOTIFICATION (per 40 CFR 268.7)

INSTRUCTION: Complete Part I. Check and complete Part II or Part III. Complete and sign Part IV.

PART I: Generator, Reference and Manifest Information

1. Generator Name: Los Alamos National Laboratory EPA I.D. #: UMC89001
2. Address: P.O. Box 1663 NC 2593
3. City: Los Alamos State: NM Zip: 8754
4. RES Reference # (BR/ HO/ L/W/MO/OP): 59083-48 Manifest #: 0013002
5. EPA Waste Codes (list ALL applicable codes and subcategories for this stream--see reverse side for subcategories):
None

6. This stream is a _____ wastewater (<1% total organic carbon and <1% total suspended solids for most wastes) or nonwastewater. If wastewater, obtain Wastewater Attachments 1, 2, and 3 from your Sales or Customer Service Representative.

PART II: Wastes Subject to Land Disposal Restrictions (If the waste is non-hazardous or a "newly listed waste" identified in Part III below, complete Part III rather than Part II.)

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that under the a RES Reference and manifest numbers, I am shipping to you a waste identified by the EPA waste code(s) and subcategory(ies) listed in Part I which is subject to the EPA Land Disposal Restrictions, as checked below.

A. Check line 1, 2, 3, 4 and/or 5, as applicable

1. Treatment standard, as checked by me in Attachment 1, which I am enclosing, for _____ F001; _____ F002; _____ F004; _____ F005; _____ F009.
2. Numerical treatment standard(s) specified in 40 CFR 268.41(a) (Table CCWE), per Attachment 3.
3. Treatment standard(s) expressed as specified technology(ies) in 40 CFR 268.42(a), for which the required technology Attachment 3, is _____ INCIN; _____ DEACT; _____ ADGAS fb NEUTR; _____ DMERC; _____ STABL; or, for Incineration in a TOSCA-permitted incinerator (RES(TX) only).
4. Numerical treatment standard(s) specified in 40 CFR 268.43(a) (Table CCW), per Attachment 3.
5. This waste is (check one) _____ an "Appendix IV lab pack" or an _____ "Appendix V lab pack". I have signed required certification on page 2 of Attachment 2, which I am enclosing.

B. Also check one or more of the following lines if applicable

6. A D001-D011 waste which (a) _____ does (b) _____ does not meet the definition of a "California List" waste definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing
7. Treatment standard(s) with a "capacity variance" until May 8, 1992, per Attachment 3, as I have checked on the enc Attachment 2. The waste (a) _____ does (b) _____ does not meet the definition of a "California List" waste definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
8. A nickel or thallium "California List" waste (see definition below). I have checked the "California List" section of Attachment 1, which I am enclosing.
9. A specific extension or variance (other than a "capacity variance"), as I have checked on Line C or D of Attachment 2, which I am enclosing.
10. The waste already meets relevant treatment standards. I have signed the required certification on page 2 of Attachment 2, which I am enclosing.

PART III: Wastes NOT Subject to Land Disposal Restrictions

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that, under the reference and manifest numbers, I am shipping to you a waste which is non-hazardous and/or identified by the EPA waste code(s) in Part I above. The waste is not subject to the Land Disposal Restrictions because the waste is non-hazardous and/or consists only of or more of the following EPA waste codes listed since November 8, 1984: D018-43, F032, F034-35, F037-38, K064-66, K088, K090-91, K101, K117-18, K123-26, K131-32, K136, U328, U353, U359 or other codes listed since 8/18/91.

PART IV: Authorized Representative

Signature Andrew J. Montoya Date 7-30-92
Print or Type Name Andrew J. Montoya
Title Staff Member

NOTE: A "California List" waste is (a) a hazardous waste containing Halogenated Organic Compounds at a concentration of 1000 mg/l, or greater; or (b) a liquid hazardous waste (including free liquids) having a pH equal to or less than 2.0 or containing any following materials at a concentration equal to or greater than specified: PCB's, 50 ppm; or (in mg/l) free cyanides, 1000; As, 500; Cd, 100; C Pb, 500; Hg, 20; Ni, 134; Se, 100; Tl, 130.

ROLLINS

ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTION NOTIFICATION (per 40 CFR 268.7)

INSTRUCTION: Complete Part I. Check and complete Part II or Part III. Complete and sign Part IV.

PART I: Generator, Reference and Manifest Information

1. Generator Name: Los Alamos National Laboratory EPA I.D. #: UMC890010
2. Address: P.O. Box 1663 MS 1593
3. City: Los Alamos State: NM Zip: 87545
4. RES Reference # (BR/HQ/L/W/MG/OP): 59080-40 Manifest #: ~~59080-40~~ 70
5. EPA Waste Codes (list ALL applicable codes and subcategories for this stream--see reverse side for subcategories):
None

6. This stream is a _____ wastewater (<1% total organic carbon and <1% total suspended solids for most wastes) or nonwastewater. If wastewater, obtain Wastewater Attachments 1, 2, and 3 from your Sales or Customer Service Representative.

PART II: Wastes Subject to Land Disposal Restrictions (If the waste is non-hazardous or a "newly listed waste" identified in III below, complete Part III rather than Part II.)

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that under the above RES Reference and manifest numbers, I am shipping to you a waste identified by the EPA waste code(s) and subcategory(ies) listed in Part I at which is subject to the EPA Land Disposal Restrictions, as checked below.

- A. Check line 1, 2, 3, 4 and/or 5, as applicable
1. Treatment standard, as checked by me in Attachment 1, which I am enclosing, for _____ F001; _____ F002; _____ F003; _____ F004; _____ F005; _____ F039.
 2. Numerical treatment standard(s) specified in 40 CFR 268.41(a) (Table CCWE), per Attachment 3.
 3. Treatment standard(s) expressed as specified technology(ies) in 40 CFR 268.42(a), for which the required technology Attachment 3, is _____ INCIN; _____ DEACT; _____ ADGAS (b) NEUTR; _____ IMERC; _____ STABL; or, for P Incineration in a TOSCA-permitted incinerator (RES(TX) only).
 4. Numerical treatment standard(s) specified in 40 CFR 268.43(a) (Table CCW), per Attachment 3.
 5. This waste is (check one) _____ an "Appendix IV lab pack" or an _____ "Appendix V lab pack". I have signed required certification on page 2 of Attachment 2, which I am enclosing.

- B. Also check one or more of the following lines if applicable
6. A D001-D011 waste which (a) _____ does (b) _____ does not meet the definition of a "California List" waste definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
 7. Treatment standard(s) with a "capacity variance" until May 8, 1992, per Attachment 3, as I have checked on the end of Attachment 2. The waste (a) _____ does (b) _____ does not meet the definition of a "California List" waste definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
 8. A nickel or thallium "California List" waste (see definition below). I have checked the "California List" section of Attachment 1, which I am enclosing.
 9. A specific extension or variance (other than a "capacity variance"), as I have checked on Line C or D of Attachment 2, which I am enclosing.
 10. The waste already meets relevant treatment standards. I have signed the required certification on page 2 of Attachment 2, which I am enclosing.

PART III: Wastes NOT Subject to Land Disposal Restrictions

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that, under the reference and manifest numbers, I am shipping to you a waste which is non-hazardous and/or identified by the EPA waste code(s) in Part I above. The waste is not subject to the Land Disposal Restrictions because the waste is non-hazardous and/or consists only of one or more of the following EPA waste codes listed since November 8, 1984: D018-43, F032, F034-35, F037-38, K064-66, K088, K090-91, K101, K117-18, K123-26, K131-32, K136, U328, U353, U359 or other codes listed since 5/15/91.

PART IV: Authorized Representative

Signature: Andrew J. Montoya Date: 7-30-92
Print or Type Name: Andrew J. Montoya
Title: Staff Member

NOTE: A "California List" waste is (a) a hazardous waste containing Halogenated Organic Compounds at a concentration of 1000 mg/l, or greater; or (b) a liquid hazardous waste (including free liquids) having a pH equal to or less than 2.0 or containing any of the following materials at a concentration equal to or greater than specified: PCB's, 50 ppm; or (in mg/l) free cyanides, 1000; As, 500; Cd, 100; Pb, 500; Hg, 20; Ni, 134; Se, 100; Tl, 130.

ROLLINS

ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTION NOTIFICATION (per 40 CFR 268.7)

INSTRUCTION: Complete Part I. Check and complete Part II or Part III. Complete and sign Part IV.

PART I: Generator, Reference and Manifest Information

- Generator Name: Los Alamos national laboratory EPA I.D. #: NM399001
- Address: PO Box 1663 MS 2593
- City: Los Alamos State: NM Zip: 87545
- RES Reference # (BR/HO/L/W/MO/OP): 58743-60 Manifest #: _____
- EPA Waste Codes (list ALL applicable codes and subcategories for this stream--see reverse side for subcategories):
None

6. This stream is a _____ wastewater (<1% total organic carbon and <1% total suspended solids for most wastes) or nonwastewater. If wastewater, obtain Wastewater Attachments 1, 2, and 3 from your Sales or Customer Service Representative.

PART II: Wastes Subject to Land Disposal Restrictions (If the waste is non-hazardous or a "newly listed waste" identified in Part III below, complete Part III rather than Part II.)

Pursuant to 40 CFR 268.7, I am notifying ___ RES(LA); ___ RES(NJ); ___ RES(TX); ___ RES of LA; ___ OPC; ___ TET that under the above RES Reference and manifest numbers, I am shipping to you a waste identified by the EPA waste code(s) and subcategory(ies) listed in Part I above which is subject to the EPA Land Disposal Restrictions, as checked below.

A. Check line 1, 2, 3, 4 and/or 5, as applicable

- Treatment standard, as checked by me in Attachment 1, which I am enclosing, for ___ F001; ___ F002; ___ F003; ___ F004; ___ F005; ___ F039.
- Numerical treatment standard(s) specified in 40 CFR 268.41(a) (Table CCWE), per Attachment 3.
- Treatment standard(s) expressed as specified technology(ies) in 40 CFR 268.42(a), for which the required technology, Attachment 3, is ___ INCIN; ___ DEACT; ___ ADGAS fb NEUTR; ___ DMERC; ___ STABL; or, for PCBs, ___ Incineration in a TOSCA-permitted incinerator (RES(TX) only).
- Numerical treatment standard(s) specified in 40 CFR 268.43(a) (Table CCW), per Attachment 3.
- This waste is (check one) ___ an "Appendix IV lab pack" or an ___ "Appendix V lab pack". I have signed required certification on page 2 of Attachment 2, which I am enclosing.

B. Also check one or more of the following lines if applicable

- A D001-D011 waste which (a) ___ does (b) ___ does not meet the definition of a "California List" waste (see definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
- Treatment standard(s) with a "capacity variance" until May 8, 1992, per Attachment 3, as I have checked on the enclosed Attachment 2. The waste (a) ___ does (b) ___ does not meet the definition of a "California List" waste (see definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
- A nickel or thallium "California List" waste (see definition below). I have checked the "California List" section of Attachment 1, which I am enclosing.
- A specific extension or variance (other than a "capacity variance"), as I have checked on Line C or D of Attachment 2, which I am enclosing.
- The waste already meets relevant treatment standards. I have signed the required certification on page 2 of Attachment 2, which I am enclosing.

PART III: Wastes NOT Subject to Land Disposal Restrictions

Pursuant to 40 CFR 268.7, I am notifying ___ RES(LA); ___ RES(NJ); RES(TX); ___ RES of LA; ___ OPC; ___ TET that, under the above reference and manifest numbers, I am shipping to you a waste which is non-hazardous and/or identified by the EPA waste code(s) listed in Part I above. The waste is not subject to the Land Disposal Restrictions because the waste is non-hazardous and/or consists only of one or more of the following EPA waste codes listed since November 8, 1984: D018-43, F032, F034-35, F037-38, K06-66, K088, K090-91, K107, K117-18, K123-26, K131-32, K136, U328, U353, U359 or other codes listed since 5/18/91.

PART IV: Authorized Representative

Signature Andrew J. Montoya Date 7-30-92
Print or Type Name Andrew J. Montoya
Title Staff Member

NOTE: A "California List" waste is (a) a hazardous waste containing Halogenated Organic Compounds at a concentration of 1000 mg/l or greater; or (b) a liquid hazardous waste (including free liquids) having a pH equal to or less than 2.0 or containing any of the following materials at a concentration equal to or greater than specified: PCB's, 50 ppm; or (in mg/l) free cyanides, 1000; As, 500; Cd, 100; Cr, 1000; Hg, 20; Ni, 134; Se, 100; Tl, 130.

ROLLINS

ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTION NOTIFICATION (per 40 CFR 268.7)

INSTRUCTION: Complete Part I. Check and complete Part II or Part III. Complete and sign Part IV.

PART I: Generator, Reference and Manifest Information

- Generator Name: Los Alamos National Laboratory EPA ID #: NM08900105
- Address: P.O. Box 1663 MS 2593
- City: Los Alamos State: NM Zip: 87545
- RES Reference # (BR/~~HD~~/L/W/MO/OP): 59361-49 Manifest #: 00130020
- EPA Waste Codes (list ALL applicable codes and subcategories for this stream--see reverse side for subcategories):
D001 ignitable liquid 10% TOS 017

6. This stream is a _____ wastewater (<1% total organic carbon and <1% total suspended solids for most wastes) or nonwastewater. If wastewater, obtain Wastewater Attachments 1, 2, and 3 from your Sales or Customer Service Representative.

PART II: Wastes Subject to Land Disposal Restrictions (If the waste is non-hazardous or a "newly listed waste" identified in Part III below, complete Part III rather than Part II.)

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that under the above RES Reference and manifest numbers, I am shipping to you a waste identified by the EPA waste code(s) and subcategory(ies) listed in Part I above which is subject to the EPA Land Disposal Restrictions, as checked below.

A. Check line 1, 2, 3, 4 and/or 5, as applicable

- Treatment standard, as checked by me in Attachment 1, which I am enclosing, for _____ F001; _____ F002; _____ F003; _____ F004; _____ F005; _____ F039.
- Numerical treatment standard(s) specified in 40 CFR 268.41(a) (Table CCWE), per Attachment 3.
- Treatment standard(s) expressed as specified technology(ies) in 40 CFR 268.42(a), for which the required technology, Attachment 3, is INCIN; _____ DEACT; _____ ADGAS (b) NEUTR; _____ DMERC; _____ STABL; or, for PC _____ Incineration in a TOSCA-permitted incinerator (RES(TX) only).
- Numerical treatment standard(s) specified in 40 CFR 268.43(a) (Table CCW), per Attachment 3.
- This waste is (check one) _____ an "Appendix IV lab pack" or an _____ "Appendix V lab pack". I have signed required certification on page 2 of Attachment 3, which I am enclosing.

B. Also check one or more of the following lines if applicable

- A D001-D011 waste which (a) does (b) _____ does not meet the definition of a "California List" waste (definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
- Treatment standard(s) with a "capacity variance" until May 8, 1992, per Attachment 3, as I have checked on the enclosed Attachment 2. The waste (a) _____ does (b) _____ does not meet the definition of a "California List" waste (definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
- A nickel or thallium "California List" waste (see definition below). I have checked the "California List" section of Attachment 1, which I am enclosing.
- A specific extension or variance (other than a "capacity variance"), as I have checked on Line C or D of Attachment 2, which I am enclosing.
- The waste already meets relevant treatment standards. I have signed the required certification on page 2 of Attachment 3, which I am enclosing.

PART III: Wastes NOT Subject to Land Disposal Restrictions

____ Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that, under the above reference and manifest numbers, I am shipping to you a waste which is non-hazardous and/or identified by the EPA waste code(s) listed in Part I above. The waste is not subject to the Land Disposal Restrictions because the waste is non-hazardous and/or consists only of one or more of the following EPA waste codes listed since November 8, 1984: D018-43, F032, F034-35, F037-38, K064-66, K088, K090-91, K107, K117-18, K123-26, K131-32, K136, U328, U353, U359 or other codes listed since 5/18/91.

PART IV: Authorized Representative

Signature: Andrew J. Montoya Date: 7-30-92
Print or Type Name: Andrew J. Montoya
Title: Staff Member

NOTE: A "California List" waste is (a) a hazardous waste containing Halogenated Organic Compounds at a concentration of 1000 mg/kg or greater; or (b) a liquid hazardous waste (including free liquids) having a pH equal to or less than 2.0 or containing any of the following materials at a concentration equal to or greater than specified: PCB's, 50 ppm; or (in mg/l) free cyanides, 1000; As, 500; Cd, 100; Cr, Pb, 500; Hg, 20; Ni, 134; Se, 100; Tl, 130.

NOTIFICATION per 40 CFR 268.7 268 APPENDIX IV/V LAB PACKS ONLY

PART I: Generator and Manifest Information

Generator Name: LOS ALAMOS NATIONAL LABORATORY

Address: LOS ALAMOS NATIONAL LABS
PO BOX 1683, MS J593
LOS ALAMOS, NM 87545

Telephone: (505) 867-7579

EPA ID#: NM0890010515

State Manifest #(s): 00100017 00100018 RES Stream #: H058742
00100019PART II: Waste Subject to Land Disposal Restrictions:

Pursuant to 40 CFR 268.7 I am notifying the following facility (check one):

- Rollins Environmental Services(LA) Rollins Environmental Services(TX)
 Rollins Environmental Services(NJ) OPC TET;

that under the above RES stream number and State Manifest Number(s), I am shipping to you a waste identified by the EPA waste numbers (listed on page 2) which are subject to the EPA Land Disposal Restrictions. These wastes were prepared in accordance to 40 cfr 268.42 and are (check 1a, 1b or both)

- 1a. Lab packs containing only waste listed in 40 CFR 268, Appendix IV, and may contain appropriate non-RCRA solid waste (Check statement 2-Part III). These lab packs must be treated in accordance with 268.42(b) by INCIN*, followed by treat of D004-008, D010, D011 metals per 268.41(a). These lab packs contain the below checked metals:

D004 D005 D006 D007 D008 D010 D011

- 1b. Lab packs containing only organic wastes listed in 40 CFR 268, Appendix V, and may contain appropriated non-RCRA waste. (Check statement 3-Part III) These lab packs must be treated in accordance with 268.42(b) by INCIN.*

PART III: Authorized Representative (Check 2, 3 or both as indicated above and sign)

2. I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only the wastes specified in Appendix IV to Part 268 or solid waste not subject to regulations under Part 261. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

3. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and or through knowledge of the waste and that the lab pack contains only organic wastes specified in Appendix V to Part 268 or solid waste not subject to regulation under Part 261. I am aware that there are significant penalties for submitting certification, including the possibility of fine or imprisonment.

Signature: Andrew J. MontoyaDate: 7-30-92Print or Type Name: Andrew J. MontoyaTitle: Staff Member

INCIN=Incineration in a RCRA subpart O facility

All information must be completed and signed by generator.



2661 10 100

OCT 01 1992

Attachment 2 'M 285

ROLLINS CHEMPAK INC.

NOTIFICATION per 40 CFR 268.7 for APPENDIX IV/V LAB PACKS ONLY

PART I: Generator and Manifest Information

Generator Name: Los Alamos National Laboratory

Address: P.O. Box 1663 MSJ 593

City: Los Alamos State: NM Zip Code: 87545

Telephone: area code (505)- 667-7579 EPA ID#: NM0890010575

STATE Manifest #(s): RES Stream (one only) # H057626-60

PART II: Waste Subject to Land Disposal Restrictions:

Pursuant to 40 CFR 268.7 I am notifying the following facility (check one):

- Rollins Environmental Services (LA) Rollins Environmental Services (TX)
Rollins Environmental Services (NJ) OPC TET;

that under the above RES stream number and State Manifest Number(s), I am shipping to you a waste identified by the EPA waste numbers circled on attached page 2-list of applicable waste codes-, which are subject to the EPA Land Disposal Restrictions. These wastes were prepared in accordance to 40 CFR 268.42 and are:(Check 1a,1b or both)

1a. Lab packs containing only waste listed in 40 CFR 268, Appendix IV, and may contain appropriate non-RCRA solid waste. (Check statement 2-Part III). These lab packs must be treated in accordance with 268.42(b) by INCIN*, followed by treatment of D004-D008, D010,D011 metals per 268.41(a). These lab packs contain the below checked metals:

D004 D005 D006 D007 D008 D010 D011

1b. Lab packs containing only organic wastes listed in 40 CFR 268, Appendix V, and may contain appropriate non-RCRA solid waste. (Check statement 3-Part III) These lab packs must be treated in accordance with 268.42(b) by INCIN.*

PART III: Authorized Representative (Check 2,3 or both as indicated above and sign)

2. I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only the wastes specified in Appendix IV to Part 268 or solid waste not subject to regulations under Part 261. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

3. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste and that the lab pack contains only organic wastes specified in Appendix V to Part 268 or solid waste not subject to regulations under Part 261. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

Signature: Andrew J. Montoya Date: 5-5-92

Print or Type Name: Andrew J. Montoya

Title: Staff Member

* INCIN=Incineration in a RCRA subpart O facility

All information must be completed and signed by generator.

APPENDIX IV/V LAB PACKS ONLY

Generator:
Stream number (one only):

Date:
Page 2 of 2

APPENDIX IV WASTE CODES (Circle all that apply)

P001, P002, P003, P004, P005, P006, P007, P008, P009, P013, P014, P015, P016, P017, P018, P020, P021, P022, P023, P024, P026, P027, P028, P029, P030, P031, P033, P034, P036, P037, P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048, P049, P050, P051, P054, P056, P057, P058, P059, P060, P062, P063, P064, P065, P066, P067, P068, P069, P070, P071, P072, P073, P074, P075, P077, P081, P082, P084, P085, P087, P088, P089, P092, P093, P094, P095, P096, P097, P098, P099, P101, P102, P103, P104, P105, P106, P108, P109, P110, P111, P112, P113, P114, P115, P116, P118, P119, P120, P121, P122, P123

U001, U002, U003, U004, U005, U006, U007, U008, U009, U010, U011, U012, U014, U015, U016, U017, U018, U019, U020, U021, U022, U023, U024, U025, U026, U027, U028, U029, U030, U031, U032, U023, U034, U035, U036, U037, U038, U039, U041, U042, U043, U044, U045, U046, U047, U048, U049, U050, U051, U052, U053, U055, U056, U057, U058, U059, U060, U061, U062, U063, U064, U066, U067, U068, U069, U070, U071, U072, U073, U074, U075, U076, U077, U078, U079, U080, U081, U082, U083, U084, U085, U086, U087, U088, U089, U090, U091, U092, U093, U094, U095, U096, U097, U098, U099, U101, U102, U103, U105, U106, U107, U108, U109, U110, U111, U112, U113, U114, U115, U116, U117, U118, U119, U120, U121, U122, U123, U124, U125, U126, U127, U128, U129, U130, U131, U132, U133, U136, U137, U138, U140, U141, U142, U143, U144, U145, U146, U147, U148, U149, U150, U152, U153, U154, U155, U156, U157, U158, U159, U160, U161, U162, U163, U164, U165, U166, U167, U168, U169, U170, U171, U172, U173, U174, U176, U177, U178, U179, U180, U181, U182, U183, U184, U185, U186, U187, U188, U189, U190, U191, U192, U193, U194, U196, U197, U200, U201, U202, U203, U204, U205, U206, U207, U208, U209, U210, U211, U213, U214, U215, U216, U217, U218, U219, U220, U221, U222, U223, U225, U226, U227, U228, U234, U235, U236, U237, U238, U239, U240, U243, U244, U246, U247, U248, U249

F001, F002, F003, F004, F005, F006, F010,

K001, K002, K008, K009, K010, K011, K013, K014, K015, K016, K017, K018, K019, K020, K021, K022, K023, K024, K025, K026, K027, K028, K029, K030, K031, K032, K033, K034, K035, K036, K037, K038, K039, K040, K041, K042, K043, K044, K045, K046, K047, K048, K049, K050, K051, K052, K060, K061, K069, K071, K073, K083, K084, K085, K086, K087, K093, K094, K095, K096, K097, K098, K099, K101, K102, K103, K104, K105, K113, K114, K115, K116

D001, D002, D003, D004, D005, D006, D007, D008, D010, D011, D012, D013, D014, D015, D016, D017
D022 D028 D019 D040

APPENDIX V Waste Codes (Circle all that apply)

P001, P002, P003, P004, P005, P007, P008, P009, P014, P015, P016, P017, P018, P020, P021, P022, P023, P024, P026, P027, P028, P030, P031, P033, P034, P037, P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048, P049, P050, P051, P054, P057, P058, P059, P060, P062, P063, P064, P065, P066, P067, P068, P069, P070, P071, P072, P075, P077, P081, P082, P084, P085, P088, P089, P093, P094, P095, P097, P098, P101, P102, P105, P106, P108, P109, P111, P112, P116, P118, P123

U001, U002, U003, U004, U005, U006, U007, U008, U009, U010, U011, U012, U014, U015, U016, U017, U018, U019, U020, U021, U022, U023, U024, U025, U026, U027, U028, U029, U030, U031, U033, U034, U035, U036, U037, U038, U039, U041, U042, U043, U044, U045, U046, U047, U048, U049, U050, U052, U053, U055, U056, U057, U058, U059, U060, U061, U062, U063, U064, U066, U067, U068, U069, U070, U071, U072, U073, U074, U075, U076, U077, U078, U079, U080, U081, U082, U083, U084, U085, U086, U087, U088, U089, U090, U091, U092, U093, U094, U095, U096, U097, U098, U099, U101, U102, U103, U105, U106, U107, U108, U109, U110, U111, U112, U113, U114, U115, U116, U117, U118, U119, U120, U121, U122, U123, U124, U125, U126, U127, U128, U129, U130, U131, U132, U133, U135, U137, U138, U140, U141, U142, U143, U147, U148, U149, U150, U152, U153, U154, U155, U156, U157, U158, U159, U160, U161, U162, U163, U164, U165, U166, U167, U168, U169, U170, U171, U172, U173, U174, U176, U177, U178, U179, U180, U181, U182, U183, U184, U185, U186, U187, U188, U189, U190, U191, U192, U193, U194, U196, U197, U200, U201, U202, U203, U206, U207, U208, U209, U210, U211, U213, U218, U219, U220, U221, U222, U223, U225, U226, U227, U228, U234, U235, U236, U237, U238, U239, U240, U243, U244, U246, U247, U248, U249

F001, F002, F003, F004, F005, F010, *S/5/4/2*

K001, K009, K010, K011, K013, K014, K015, K016, K017, K018, K019, K020, K021, K022, K023, K024, K025, K026, K027, K029, K030, K031, K032, K033, K034, K035, K036, K037, K038, K039, K040, K041, K042, K043, K044, K045, K046, K047, K048, K049, K050, K051, K052, K054, K060, K065, K073, K083, K084, K085, K086, K087, K093, K094, K095, K096, K097, K098, K099, K101, K102, K103, K104, K105, K111, K112, K113, K114, K115, K116, K117, K118, K123, K124, K125, K126, K136,

D001, D012, D013, D014, D015, D016, D017

ROLLINS

ENVIRONMENTAL SERVICES

LAND DISPOSAL RESTRICTION NOTIFICATION (per 40 CFR 268.7)

INSTRUCTION: Complete Part I. Check and complete Part II or Part III. Complete and sign Part IV.

PART I: Generator, Reference and Manifest Information

1. Generator Name: Los Alamos National Laboratory EPA I.D. #: NM 08900109
2. Address: P.O. Box 1663 MS 2593
3. City: Los Alamos State: NM Zip: 87640
4. RES Reference # (BR/ HO /L/W/MO/OP): 55546-18 Manifest #: _____
5. EPA Waste Codes (list ALL applicable codes and subcategories for this stream--see reverse side for subcategories):
0001 ignitable compressed gas

6. This stream is a _____ wastewater (<1% total organic carbon and <1% total suspended solids for most wastes) or nonwastewater. If wastewater, obtain Wastewater Attachments 1, 2, and 3 from your Sales or Customer Service Representative.

PART II: Wastes Subject to Land Disposal Restrictions (If the waste is non-hazardous or a "newly listed waste" identified in III below, complete Part III rather than Part II.)

Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that under the above RES Reference and manifest numbers, I am shipping to you a waste identified by the EPA waste code(s) and subcategory(ies) listed in Part I above which is subject to the EPA Land Disposal Restrictions, as checked below.

A. Check line 1, 2, 3, 4 and/or 5, as applicable

1. Treatment standard, as checked by me in Attachment 1, which I am enclosing, for _____ F001; _____ F002; _____ F003; _____ F004; _____ F005; _____ F006.
2. Numerical treatment standard(s) specified in 40 CFR 268.41(a) (Table CCWE), per Attachment 3.
3. Treatment standard(s) expressed as specified technology(ies) in 40 CFR 268.42(a), for which the required technology, Attachment 3, is _____ INCIN; DEACT; _____ ADGAS; _____ NEUTR; _____ DMERC; _____ STABL; or, for P _____ Incineration in a TOSCA-permitted incinerator (RES(TX) only).
4. Numerical treatment standard(s) specified in 40 CFR 268.43(a) (Table CCW), per Attachment 3.
5. This waste is (check one) _____ an "Appendix IV lab pack" or an _____ "Appendix V lab pack". I have signed required certification on page 2 of Attachment 2, which I am enclosing.

B. Also check one or more of the following lines if applicable

6. A D001-D011 waste which (a) _____ does (b) does not meet the definition of a "California List" waste definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
7. Treatment standard(s) with a "capacity variance" until May 8, 1993, per Attachment 3, as I have checked on the enclosed Attachment 2. The waste (a) _____ does (b) _____ does not meet the definition of a "California List" waste definition below). If (a), I have also checked the "California List" section of Attachment 1, which I am enclosing.
8. A nickel or thallium "California List" waste (see definition below). I have checked the "California List" section Attachment 1, which I am enclosing.
9. A specific extension or variance (other than a "capacity variance"), as I have checked on Line C or D of Attachment 2, which I am enclosing.
10. The waste already meets relevant treatment standards. I have signed the required certification on page 2 of Attachment 2, which I am enclosing.

PART III: Wastes NOT Subject to Land Disposal Restrictions

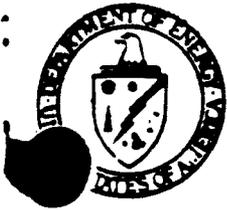
Pursuant to 40 CFR 268.7, I am notifying RES(LA); RES(NJ); RES(TX); RES of LA; OPC; TET that, under the above reference and manifest numbers, I am shipping to you a waste which is non-hazardous and/or identified by the EPA waste code(s) in Part I above. The waste is not subject to the Land Disposal Restrictions because the waste is non-hazardous and/or consists only of or more of the following EPA waste codes listed since November 8, 1984: D018-43, F032, F034-35, F037-38, K064-66, K088, K090-91, K107, K117-18, K123-26, K131-32, K136, U328, U353, U359 or other codes listed since 5/18/91.

PART IV: Authorized Representative

Signature: Andrew J. Montoya Date: 7-30-92
Print or Type Name: Andrew J. Montoya
Title: Staff Member

NOTE: A "California List" waste is (a) a hazardous waste containing Halogenated Organic Compounds at a concentration of 1000 mg/l, or greater; or (b) a liquid hazardous waste (including free liquids) having a pH equal to or less than 2.0 or containing any of the following materials at a concentration equal to or greater than specified: PCB's, 50 ppm; or (in mg/l) free cyanides, 1000; As, 500; Cd, 100; C; Pb, 500; Hg, 20; Ni, 134; Se, 100; Tl, 130.

ENCLOSURE
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Department of Energy
Albuquerque Operations
Los Alamos Area Office
Los Alamos, New Mexico 87544

NOV 25 1987

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Michael Burkhardt, Director
N. M. Environmental Improvement Division
P. O. Box 968
Santa Fe, New Mexico 87504-0968

Dear Mr. Burkhardt:

Enclosed is a revised hazardous waste permit application (Parts A and B) as was discussed in a meeting between Mr. Kelley Crossman and Los Alamos National Laboratory's staff, on September 22, 1987. This revised application supersedes all previously submitted applications. The questions raised in your letter of September 9, 1987, regarding entries in the Part A (EPA Form 3510-1) are resolved in this submittal.

Changes in the Part B are indicated by a vertical line in the margin of the affected pages. These changes, as well as those made in the Part A are summarized below.

1. Modification of the Part A for increased storage/treatment.

- A. Correction of the Part A forms to reflect which wastes will be incinerated. As the result of the trial burn, it was demonstrated that a number of wastes could be incinerated that were not previously listed in the Part A of the November 1986 permit application. This revision adds those chemicals to the enclosed Part A in accordance with FWR-3, 302.C.3.a.
- B. Modifications to Section III.C., Page 1 of 5, in accordance with FWR-3, 302.C.3.b. EID and the Laboratory have discussed on several occasions the need for additional storage capacity over and above that currently allowed at IA-54, Area L. Efforts to comply are exacerbated by several related factors:

- The Laboratory is continuing to make a concerted and successful effort to comply with current waste regulations. This effort has resulted in a large increase in the on-site shipment of waste to permitted storage areas (principally, Area L) and treatment locations. As an example of this increase in years past the movement of 200 drums a year was normal. Last year we moved about 2,200 drums to Area L.



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Michael Burkhart

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- The effort in sampling and analysis of this waste has grown commensurately with the increase in waste volume and analytical requirements. To relieve this pressure, the Laboratory has been operating its analytical capability at capacity and contracting for the overload at expensive outside laboratories. Minimum turn-around time for proper sampling, packaging, radioactive and chemical analyses, and reporting is about four weeks.
- On-site treatment is possible for some waste forms, but a large volume must be sent off-site for disposal. This means that the Laboratory must identify qualified commercial treatment, storage or disposal facilities (TSDFs) and meet their waste acceptance criteria. To ensure that a TSDF is qualified, Laboratory personnel must inspect the operation of each bidder. TSDF waste acceptance criteria usually require specialized packaging, additional sampling for their analytical needs, and accumulation of minimum volumes of similar waste forms. It is taking several months to ensure that off-site operations are conducted in accordance with Federal, State, and TSDF regulations.
- Associated with the last item, delays have lately been caused by the TSDFs reaching their individual storage and throughput capacity. As an example, shipments to our current off-site contractor for incineration have been suspended until sometime in January because of a back-log caused by a nation-wide shortage in approved incineration capacity.

The net balance between increased input to on-site storage, a minimum hold-up for analyses and packaging, and a throttled output to TSDFs has been a stored volume that continues to exceed our current permit. It is clear that this situation reflects changes in regulations that are long-term. Therefore, the current shortage will continue to be a problem until input is reduced, storage is increased, or TSDF options are expanded. The most logical option for addressing the problem is to provide adequate overall Laboratory storage (including an increase at Laboratory treatment locations). The volumes we recommend are the following:

S01 (storage in containers) has been increased from 17880 gal to 237,990 gal. Two 250 gal. storage containers (tuff tanks) were included in the original 17880 figure. These two storage containers do not exist.

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Michael Burkhart

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Nonliquid waste storage - 198,000 gal (3600 drums). This volume was discussed at a meeting with Mr. Kelley Crossman, on September 9, 1987, and agreed to as a legitimate and reasonable expansion. This involves a dirt-bermed area that is being used to store, on pallets, 55-gal. drums of nonliquid waste. Because no liquids are involved, a secondary containment structure is not needed.

TA-50 Storage Pad - 17,000 gal. See Item 6 below.

Batch Waste Treatment Plant Storage - 1980 gal. See Item 6 below.

TA-50 Incinerator Storage Unit - 3630 gal. See Item 5 below.

S02 (Storage in tanks) has been increased from 0 gal. to 6600 gal.

Area L Treatment Tanks - 4 tanks @ 1665 gal. These tanks have been used for nonhazardous and hazardous waste treatment. While their primary purpose will continue to be for treatment, there is a need to use these tanks for storage in the event the waste cannot be removed in a timely manner after treatment or in the event bulk storage is necessary.

S04 (Storage in a surface impoundment) is the inactive surface impoundment (SI) at Area L that the Laboratory intends to close in accordance with an EID/EPA approved closure plan. This SI is not now being used nor will it be used in the future.

T02 (Treatment in a surface impoundment) is the inactive surface impoundment at the TA-16 burning ground. Same explanation as under S04 above.

T03 (Treatment in an incinerator) has been increased from 0.15 to 0.56 tons per hour. This increase of 0.41 tons per hour is explained in Item 9. below.

T04 (Other treatment) has been increased by 2534 gal. per day because of the cementation processes planned at Area L and the TA-50 Batch Waste Treatment Facility. This process is intended to assure that no free liquids are left in the waste and to immobilize hazardous constituents. This process will render the waste less hazardous and in some cases render it nonhazardous in accordance with waste minimization requirements of the Hazardous and Solid Waste Amendments of 1984.

2. The system upgrade of the TA-50 Controlled Air Incinerator. The incinerator, in addition to disposing of hazardous waste, has burned transuranic (TRU) waste as a research and development operation. In converting to a production mode for TRU disposal it was decided the facility needed to be modified to accommodate an increased radioactivity. Because this impacts hazardous waste operations, the permit application is modified to reflect these changes. The Department of Energy (DOE) is making these changes in the application and requests the EID's approval under interim status in accordance with HWMR-3, 302.C.3.b. The trial burn results have also been added to Appendix J.
3. The system upgrade of the TA-50 Batch Waste Treatment Facility (BWTF). Before the system was put into operation it was determined that it had to be modified for safety and operational purposes. For example, the electrical components had to be made explosion proof. No wastes are intended to be treated that have not previously been identified nor has the design capacity been increased or the process changed. These modifications are detailed in this submittal.
4. The addition of hazardous waste treatment processes at TA-54, Area L. Since the previous application, Area L has been receiving barium-contaminated sand resulting from the burning of waste explosives. This sand is presently being stored at Area L in 55-gal. drums. Because of the potential of the sand being contaminated with explosives, the DOE and the Laboratory do not wish to send it off-site for treatment or disposal. The application is being modified to address the treatment of this sand. The DOE also requests that this additional treatment process be granted interim status under HWMR-3, 302.C.3.c.

Treatment at the Laboratory is necessary because, due to the source of this waste (i.e. explosive activity), it cannot be sent off-site for treatment or disposal.

5. The addition of a hazardous waste storage area for the TA-50 Controlled Air Incinerator. When the incinerator is operating it will run 24 hours per day for 7 days per week. A staging area will be constructed at the Incinerator (TA-50, Building 37) so a sufficient quantity can be accumulated to facilitate orderly processing of the waste for incineration.
6. Increase storage at TA-54, Area L and the TA-50 BWTF. Storage at Area L is increased to accommodate an area for storage of non-liquid hazardous waste. An additional storage pad, originally planned for Area L, will be placed at TA-50 instead. This pad is identical to the one at Area L and will combine some of the storage capability planned at both TA-50 and Area L. In addition, small storage modules will be located near the BWTF to support this unit. Interim status is also requested for this increased storage in accordance with HWMR-3, 302.C.3.b. The additional storage at Area L and TA-50 is necessary to house the waste that cannot be adequately handled at the present Area L storage pad. Because Area L storage and treatment is intended to be phased out in the next 5-6 years, the DOE and the Laboratory feel it more appropriate to place the new storage pad, as well as future expansions/replacements, at TA-50 to consolidate these activities near other on-site treatment and storage operations.
7. Relisting of the TA-14 Burn Cage. The reference to this burn cage that burns explosive contaminated combustibles was inadvertently deleted from a previous application. This submittal re-inserts this activity into the Part B.
8. Revisions of the Part B Contingency Plan, Waste Analysis Plan and Training Plan. These three sections of the application have been updated to reflect the current status at the Laboratory and to meet additional regulatory requirements. The contingency plan has been modified to be consistent with the DOE's Spill Prevention Control and Countermeasures Plan for the Laboratory and the Laboratory's Emergency Management Office Charter. The waste analysis plan has been revised to include the Toxicity Characteristic Leaching Procedure (TCLP) as required by the land ban regulations. The training section has been revised to address different personnel needing training, as well as different job descriptions for these people (Appendix S).

Michael Burkhart

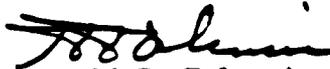
6

9. Addition of an incinerator at TA-16 Burning Ground. This incinerator will replace the burn cage at TA-16 and burn the same type of waste, i.e. potentially explosives contaminated burnable trash. The DOE is requesting interim status for this incinerator in accordance with HWMR-3, 302.C.3.c. The Laboratory intends to operate this incinerator in compliance with HWMR-3, 206.D.8.a (2). These hazardous wastes (i.e. ignitable and reactive) as well as nonhazardous, controlled solid waste are presently being open burned. The open burning permit issued by the EID (Air Quality Bureau) will expire in May 1988 with little likelihood of renewal. Because there is the possibility of explosives unintentionally entering this waste, it cannot leave the immediate site for disposal. This unit will be much more environmentally acceptable by greatly reducing particulate emissions into the environment.

I would appreciate it if you will return or destroy the previous copies of this document to avoid any confusion as to which one is the predominate issue.

If you have any questions regarding this revised application or need further information, please call Mr. Jim Phoenix of my staff at 667-5288.

Sincerely,


Harold E. Valencia
Area Manager

Enclosures

cc w/enclosures:
A. Davis, USEPA, Dallas, TX
J. Themelis, KHD, AL

LTP:JAP:000064



**ENCLOSURE
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.



BRUCE KING
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-2850

JUDITH M. ESPENOSA
SECRETARY

RON CURRY
DEPUTY SECRETARY

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

May 11, 1994

Mr. Jerry Bellows, Area Manager
Department of Energy
Los Alamos Area Office
528 35th Street
Los Alamos, NM 87544

MAY 19 1 43 PM '94

Dear Mr. Bellows:

**RE: Conditional approval of RCRA Hazardous Waste Permit
modifications.
EPA ID No. NM 0890010515-1**

The Hazardous and Radioactive Materials Bureau (HRMB) of the New Mexico Environment Department (NMED) has reviewed DOE/LANL's response to the NOD concerning the Technical Completeness Review of Area G TRU Storage Units. Following discussions between Jack Elvinger of your staff and Steve Zappe of HRMB concerning the intent of our March 15, 1994 letter, the NMED approves your permit modification request with the following conditions:

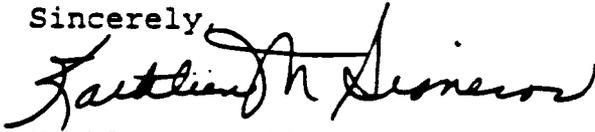
1. Because NMED does not accept knowledge of process (KOP) as a substitute for actual sampling and chemical/physical analysis required under the New Mexico Hazardous Waste Management Regulations (HWMR-7), 40 CFR 264.13, you must submit a revised waste analysis plan, containing a schedule for characterization of this mixed waste through sampling and analysis, for NMED approval by March 31, 1995.
2. Because revision pages to the contingency plan, closure plan, and waste management practices (Sections 4, 7, and 9) submitted January 28, 1994, do not allow simple insertion to update the original documents, you must submit complete copies of these three documents. Include a revised copy of Table 7-2 containing complete information for all emergency managers. While HWMR-7, 40 CFR 270.12(b) denies claims of confidentiality for the name and address of any permit applicant or permittee, you may include an additional copy of Table 7-2 requesting confidentiality.

DOE/LANL may now proceed with relocation of mixed waste presently stored on pads 1, 2, and 4 in TA-54, Area G, to the new storage pads authorized by this permit modification.

Mr. Jerry Bellows
Page 2
May 11, 1994

Please contact Mr. Steve Zappe at (505) 827-4308 if you have any questions.

Sincerely,



Kathleen M. Sisneros
Director, Water and Waste Management Division

cc: Benito Garcia, HRMB
Barbara Hoditschek, HRMB
Susan McMichael, NMED
Jon Mack, DOE LAAO
Joyce Laeser, Counsel, LAAO
File: LANL Red 94

Project No. 301608.07
Revision 0.0
September 1993

RCRA Part B Permit Application Volume I

**Storage Pads 1, 2, and 4; Storage Domes A-D
Technical Area 54, Area G**

**Chemical Plating Waste Treatment Skid;
Treated Liquid Storage Tanks
Technical Area 63, Hazardous Waste Treatment Facility**

Prepared for:

***Los Alamos National Laboratory
Environmental Protection Group EM-8
Los Alamos, New Mexico 87545***

Controlled Copy No. 6

Table 3-4

Transuranic Mixed Waste Analytical Parameters and Proposed Test Methods^a

Parameter	Test Method	SW-846 Method
Corrosivity/pH	Electrometric	9040
Toxicity characteristic for metals	Toxicity Characteristic Leaching Procedure (TCLP) Extraction followed by Atomic Absorption (AA) Spectrometry or Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP)	1311
Arsenic	Graphite Furnace AA, Gaseous Hydride AA	7060, 7061
Barium	ICP, Direct Aspiration AA, Graphite Furnace AA	6010, 7080, 7081
Cadmium	ICP, Direct Aspiration AA, Graphite Furnace AA	6010, 7130, 7131
Chromium	ICP, Direct Aspiration AA, Graphite Furnace AA	6010, 7190, 7191
Lead	ICP, Direct Aspiration AA, Graphite Furnace AA	6010, 7420, 7421
Selenium	Graphite Furnace AA, Gaseous Hydride AA	7740, 7741
Silver	ICP, Direct Aspiration AA, Graphite Furnace AA	6010, 7760, 7761
Mercury	Cold-Vapor AA	7470
Volatile organics	TCLP Extraction followed by Gas Chromatography/Mass Spectrometry (GC/MS) Capillary Column Technique	8240 8260
Semivolatile organics	TCLP Extraction followed by GC/MS Packed Column Technique Capillary Column Technique	8250 8270
Metals	Acid Digestion followed by ICP	3020 6010
Arsenic	ICP, GFAA	6010, 7060
Barium	ICP	6010
Beryllium	ICP	6010
Cadmium	ICP	6010
Chromium	ICP	6010
Lead	ICP	6010
Nickel	ICP	6010
Selenium	ICP, GFAA	6010, 7740
Silver	ICP	6010
Thallium	ICP, GFAA	6010, 7841
Zinc	ICP	6010

^a U.S. Environmental Protection Agency, "Test Methods for Evaluating Solid Waste" (SW-846), 4th Edition (EPA, 1992).

ENCLOSURE
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LOS ALAMOS

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

redo on computer

WASTE PROFILE FORM

EM-3 USE ONLY
Reference Number <i>C-1-F-1</i>

Complete both sides of this form using a black or blue pen. Incomplete forms will be rejected. Send form to ATTN: WPE MS 449C

Division/Group <i>SST-8</i>	Telephone <i>5-3823</i>	Mail Stop <i>D435</i>	Technical Area <i>3</i>	Building <i>40</i>	Room <i>S104</i>
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Method of Characterization

Knowledge of Process (KOP) Chemical/Physical Analysis (specify below)

MSDS attached (optional) - OR - Request for analysis Analysis attached

Waste Category (Choose one or more of the categories below that most accurately describe your waste)

<input checked="" type="checkbox"/> Flammable	<input type="checkbox"/> Peroxide	<input type="checkbox"/> Photographic	<input type="checkbox"/> Spent coolant	<input type="checkbox"/> Plastics
<input checked="" type="checkbox"/> Combustible	<input type="checkbox"/> Beryllium	<input type="checkbox"/> Sanitary	<input type="checkbox"/> Aerosol cans	<input type="checkbox"/> Filter media
<input type="checkbox"/> High explosive	<input type="checkbox"/> Asbestos	<input type="checkbox"/> Radiochemistry	<input type="checkbox"/> Motor oil	<input type="checkbox"/> Vacuum filter media
<input type="checkbox"/> DOT oxidizer	<input checked="" type="checkbox"/> Solvent	<input type="checkbox"/> Paint waste	<input type="checkbox"/> Pump oil	<input type="checkbox"/> Cement paste
<input type="checkbox"/> Pyrophoric	<input type="checkbox"/> Waste rage	<input checked="" type="checkbox"/> Laboratory trash	<input type="checkbox"/> Capacitor oil	<input type="checkbox"/> Nonrecoverable
<input type="checkbox"/> Cyanide	<input type="checkbox"/> Glass	<input type="checkbox"/> Metallurgy	<input type="checkbox"/> UST remediation	<input type="checkbox"/> Nonrecyclable
<input type="checkbox"/> Heavy metal	<input type="checkbox"/> Plating solution	<input type="checkbox"/> Scrap metal	<input type="checkbox"/> Contaminated acids	<input type="checkbox"/> Building debris
<input type="checkbox"/> Corrosive	<input type="checkbox"/> Etchant	<input type="checkbox"/> Medical/Biological	<input type="checkbox"/> Environmental/SWMU	<input type="checkbox"/> Firing site debris

General Description (provide a general description of the waste and/or waste-generating process below)

Our hazardous waste consists of Kimwipes, Q-tips and some latex gloves. All used with 111 Trichloroethane (personal, sometimes acetone) propylamine

Waste Description

Form	Ignitability (F)	Corrosivity (pH)	Reactivity	PCBs
<input checked="" type="checkbox"/> Solid	<input checked="" type="checkbox"/> < 100°	<input type="checkbox"/> 2.0 or less	<input type="checkbox"/> Unstable	<input type="checkbox"/> < 50 ppm
<input type="checkbox"/> Semisolid/sludge	<input type="checkbox"/> 100° to 135°	<input type="checkbox"/> 2.1 to 12.4	<input type="checkbox"/> Water reactive	<input type="checkbox"/> 50 to 500 ppm
<input checked="" type="checkbox"/> Absorbed liquid	<input checked="" type="checkbox"/> 140° to 200°	<input type="checkbox"/> 12.5 or greater	<input type="checkbox"/> Cyanides	<input type="checkbox"/> > 500 ppm
<input type="checkbox"/> Liquid	<input type="checkbox"/> > 200°	<input checked="" type="checkbox"/> Not aqueous	<input type="checkbox"/> Sulfoxes	<input checked="" type="checkbox"/> None
<input type="checkbox"/> Gas cylinder or vessel	<input type="checkbox"/> Not ignitable		<input type="checkbox"/> Shock sensitive	
<input type="checkbox"/> Multilayered			<input type="checkbox"/> Class A or B explosive	
<input type="checkbox"/> Suspended solids			<input checked="" type="checkbox"/> Nonreactive	
<input type="checkbox"/> Powder or ash				

<p>Waste Origin</p> <p>A. Is this waste generated in a radiation controlled area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>B. If yes, is the waste generated or accumulated in a properly defined, registered radioactive materials management area (RMMA)? (RMMA # _____) <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>C. If A is yes and you have determined that your waste is nonradioactive, provide justification in the additional comments section on the reverse side of this form.</p>	<p>Radioactivity</p> <p><input checked="" type="checkbox"/> Nonradioactive <input type="checkbox"/> Suspect <input type="checkbox"/> Radioactive</p> <p>Activity Measure Radiation Type Half-life</p> <p><input type="checkbox"/> ≤ 2.0 nCi/g <input type="checkbox"/> alpha <input type="checkbox"/> t^{1/2} < 20 yr</p> <p><input type="checkbox"/> > 2.0 nCi/g <input type="checkbox"/> beta <input type="checkbox"/> t^{1/2} ≥ 20 yr</p> <p><input type="checkbox"/> > 10.0 nCi/g <input type="checkbox"/> gamma</p> <p><input type="checkbox"/> > 100 nCi/g <input type="checkbox"/> tritium</p>
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WASTE GENERATOR CERTIFICATION: Based on my knowledge of the waste and/or chemical/physical analysis, I certify that the information on this form is correct. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violators.

Waste Generator's Name (last, first, middle) <i>Baldonado, Juan R.</i>	Z Number <i>077713</i>	Signature <i>Juan R. Baldonado</i>	Date <i>8-19-92</i>
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If your waste management coordinator is the custodian of your waste management documentation, provide the name and mail stop of this person (optional). --->	Name (last, first, middle) <i>Baldonado, Juan R.</i>	Mail Stop <i>D 433</i>
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RECEIVED AUG 25 1992

ENCLOSURE
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Los Alamos
NATIONAL LABORATORY

memorandum

NONPROLIFERATION AND INTERNATIONAL SECURITY
Space & Atmospheric Sciences, NIS-1

To:MS: Liz English, ICF Kaiser Engineers, Inc.
From:MS: Juan Baldonado, NIS-1, MS D466 JAB
Phone/FAX: 5-3823/FAX 5-7395
Symbol: NIS-1-94-652
Date: July 28, 1994

Subject: RESPONSE TO REPORTED FINDING

This memorandum is in response to a "finding" reported to me in a report dated July 21, 1994 concerning an EPA multi-media investigation that took place August 2 through 12, 1993.

The finding states: "Three separate laboratories were using one accumulation area in Building 40, Room W112; this area was also not in control of the operator producing the hazardous waste."

My understanding as to the content of the finding is the distance between the satellite storage area in Room W112 and the other two contributing laboratories, N120 and S104, is too great as explained by Liz English.

I have questioned EM-8, as well as Liz English, as to the "legal distance" for waste accumulation in a case like this and got no solid answer. This was also brought up during the time we were establishing our satellite storage in W112 and planning to use this as our central collection point for our three laboratories within SM 40.

I will simply state facts as to the way our hazardous waste stream is controlled.

- 1) our waste is generated and handled in accordance with WPRF 4274.
- 2) we were allowed to use one point of satellite storage for three laboratories within SM40 west and south wings, we chose Room W112. This room has a limited access key.
- 3) the laboratories N120 and S104 have cipher locks on them to prevent any nondescribed waste as per WPRF 4274 from entering our waste management stream.
- 4) I am the waste generator as well as the person in charge of waste collection and transport to the satellite storage container in Room W112.

All of these conditions have been in effect since day one of our satellite storage area and waste management system and were being followed at the time of the EPA multi-media investigation! We were also commended for doing a good job with our satellite storage recently, as per a memorandum from DOE, AOO, LAAO dated June 14, 1994 signed by Jon Mack, Waste Management, ES&H Branch.

JRB:ko